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About the Authors

Dr. Nash, author, lecturer, pioneer, is Director of Physical Education and Athletics at Brigham Young University . . . **Dr. Friedrich** is a member of the staff in physical education at Michigan State University . . . **Dr. Norton,** professor of health and physical education, is also head of the Department for Women, Stephen F. Austin State College, Nacogdoches, Texas . . . **Richard Calisch,** who recently returned from serving in the Marines, is joining the staff at Teachers College, Columbia, soon . . . **Dr. Webster** is a professor of physical education, Michigan State University . . . **Dr. Coffey** is a member of the physical education staff at Bowling Green State University, Bowling Green, Ohio . . . **Dr. Young** is a member of the Department of Physical Education, the State University of Iowa . . . **Mrs. Redman** recently retired from the State University of Iowa library after thirty years of service . . . **Mr. Duncan** is a member of the staff in physical education at U.C.L.A. **Mr. Nareau** is principal of North Avenue School, Del Paso Heights, California . . . **Mr. Streit,** director of Health and Hygiene, Cincinnati, Ohio, is a leader in the Midwest . . . and **Mr. Annarino** is an instructor in physical education at Purdue University.

Department Editors

TEACHING TECHNIQUES
Nelson G. Lehsten

ELSEWHERE IN THE WORLD
C. O. Jackson

TEACHABLE DANCES
Harry Grabner

BOOK REVIEWS
K. W. Bookwalter

RECENT ARTICLES
K. W. Bookwalter

WHO'S WHO IN THE PROFESSION
K. W. Bookwalter

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In the Editor's Corner

The guest editorial in this issue is by Dr. Ray O. Duncan, Dean of the School of Physical Education and Athletics, University of West Virginia

Desirable Trends in Athletics

THE TREND IN COLLEGE ATHLETICS seems to be toward expansion. It is true that many colleges have dropped football, yet the overall trend throughout the nation seems to be an increase in interest among the total population for sports and athletics. The desire for "big-time athletics" is not a desirable trend because the public and alumni become unreasonable in their demands for a winning team.

There are many problems in intercollegiate athletics which are intensified by the tremendous public interest which focuses attention upon college athletic programs. The president of a Midwestern university recently decried preseason ratings and post-season bowl bids, and said he hoped a way could be found to preserve the game of football in its proper college setting. Dishonesty and violations in recruiting and subsidization are the greatest problems facing intercollegiate athletics today.

It seems obvious that college athletics, particularly football and basketball, are being projected into a national whirlpool of publicity and commercialism which borders upon extravagance. Due to tremendous interest and publicity the entire program is in the spotlight and both the good and bad features are illuminated and often exaggerated.

There are also bad practices in our physical education programs to match the good which is being done. However, the spotlight is not on these programs to the extent that it is on athletics. Some of our leaders in physical education have been outspoken throughout the years concerning bad practices in intercollegiate athletics.

Obviously, physical education and intercollegiate athletics are quite different in regard to objectives and administrative structure, nevertheless, there is a kinship which indicates a close family relationship. Public and alumni interest and support of athletics can benefit physical education. The physical education concept of athletics for all students will not become prevalent if it is offered as a substitute for, or an antagonist of, the varsity program. There is room for both and a need for both. The family idea of physical education and athletics suggests that college physical educators should have a deep and real concern for the intercollegiate program. There should be mutual respect, cooperation, and assistance between staff members of intercollegiate athletics and physical education.

We physical educators should take the initiative for the development of a desirable family relationship. This will be difficult and practically impossible in some situations. However, we must strive for such a desirable situation. In the colleges and universities with major programs in physical education, there are large numbers of major student who are members of varsity teams. It is tremendously important that these young men develop sound professional attitudes, concepts and understanding in regard to education in general and physical education and athletics in particular.

These young men are going into our high schools as coaches and teachers of physical education. We can not bring them to our way of thinking by aloofness and criticism. If there is division in the family, the athletes will go with the "varsity pattern." The coaching profession needs the sound educational base which physical education can provide. The physical education profession needs the tremendous alumni and public interest in intercollegiate athletics to provide facilities, support, and a standard of excellence in sports.

We physical educators should take the initiative in the following manner:

1. Refrain from public criticism of intercollegiate athletics.
2. Take a positive approach and speak only of the good in athletics.
3. Confine our criticisms to constructive discussions within the college family.
4. Demonstrate our interest at our various colleges by attending practice sessions and varsity games.
5. Go more than half way to cooperate with the varsity athletic coaches.
6. Attempt to inculcate our major students with the importance of the family approach in regard to physical education and athletics, and a sound philosophy in the physical education concept of athletics for all, yet with an understanding of the varsity ideal of excellence and a realistic approach to the achievement of both.

The development of this trend to its ultimate fruition could firmly establish physical education and athletics on a sound basis as essential parts of college education. Failure of this trend to continue could result in a decline of physical education as a college requirement, and reduce intercollegiate athletics to a permanent status of dubious educational value.

—Ray O. Duncan.

Abuse of Rest

Jay B. Nash

SO-CALLED MIND REST may become more disastrous than body rest. Men lost their intellectual curiosity not by growing old, but by refusing or neglecting to keep themselves challenged with new problems and experiences. We think and keep alive the ability to think only by literally pushing ourselves into new activities.

One may continue to solve problems, to think, and to engage in the affairs of the intellect for many years, if practice is kept up. To keep alert, a person must systematically challenge himself, attempt new things, take on new responsibilities, and keep his hat in the ring. The greatest danger of being a spectator is that there is no exercise of power involved.

The Situation

With continued lack of exercise it becomes easy to use the mechanism of escape. Excuses are found and easily believed. The fear to be a contender in the arena of life increases. Risks are avoided. One needs only to stop, not necessarily to go backward, to lose out in life's race.

The abuse of rest is the opposite side of the shield of the law of use. In life, power is pyramided through exercise. The man-built engine wears out, while in the human engine all parts develop power through use. Muscles and organs which are used develop; those which are not used atrophy. The diagnosis "deterioration through inactivity" is being used by the medical profession. Mechanisms may be injured through too much use, but adapted use strengthens the organs. Man must develop the ability to judge and to choose.

Activity Is Needed

The heart is a muscle and develops power in use. The eye develops keenness and power to adjust in use; it atrophies in the fish in the Mammouth Cave through years of non use. The senses of hearing and of taste become keener with use. *"Use, or relinquish"* is a stern law.

For some years the medical profession has been emphasizing the danger involved in long periods of bed rest. This principle had to be learned the hard way. During World War II there just were not enough beds for the people who needed hospitalization, either in private hospitals or in governmental institutions. In the case of operations—appendectomy, hernia, and the like—instead of keeping patients for twelve, fourteen, and sometimes eighteen days, they were discharged in a week.

Within a twenty-four hour period, patients sat on the edge of the bed and dangled their feet. The next day they stood and, later, walked around the end of the bed with support. On the fifth or sixth day they walked alone and in another twenty-four hours went home. The results were astonishing. Patients were not weakened by lying flat for long periods. They kept up their strength for normal functioning, and by carefully following advice about stair-climbing and overfatigue, made complete recoveries in comparatively short periods of time.

A Minimum of Exertion

The abuse of rest is amply supported by examples from many businessmen today. Popular writers and service-club lecturers have drilled into them, for an appropriate honorarium, just the thing the tired businessman wants to hear. He is told that he does not need to exercise; exercise is a secret killer. He is told that the tortoise which does not exercise lives longer than man.

In the first place, this is not true and, in the second place, who wants to be a tortoise? Turtles cannot play golf, thumb a guitar, play in an orchestra, land a sailfish, or weave a rug. Under the impetus of "take it easy," businessmen have ridden to the office door, sat in a chair most of the day, and ridden home. Such a life gives an individual an excuse to be lazy and ample time for an extra Martini.

As a matter of fact, few men overwork; probably none. Many overeat, overworry, overfret and overdrink. Many need exercise in activities which are not only safe, but power-building, and also fun.

What Happens to Man

From the abuse of rest, the ability to function normally is lost. A few pounds of weight are added each year; the arteries lose some of their elasticity, and the heart gets no stronger. With abuse of rest, the capacity to function is lost, and when the individual does attempt to enter into what should be normal activities, or to meet emergencies, something snaps, usually the inelastic arteries.

The myths about heart disease can cause nearly as much agony as heart disease itself and, incidentally, in many more cases. Dr. Paul D. White, world-famous heart specialist, when asked what an individual could do to avoid heart trouble, answered promptly, "For one thing, a moderate amount of activity is always important." He emphasizes, as he should, that this does not mean overdoing, but it does mean exercise in order to avoid the abuse of rest.

Hazards?

Alarmists use extreme examples when they try to win a point. They will speak of the danger of a fast game of handball, thirty-six holes of golf, mountain climbing at thirteen thousand feet and thirty minutes of calisthenics before breakfast. No one in his right mind would enter into these activities or advocate them for others after forty, in fact, for many people long before forty. The peak years of man's ability are between nineteen and twenty-six and then only with training which has been carried on over a long time. Strenuous activities are not for many or for long.

One of the most significant bits of ancient Greek wisdom was found some years ago carved in stone over the entrance of a gymnasium or palaestra. It read, *"Strip or retire."* To every boy who entered, that was his guide. *Get into action; be a participant; there are no spectators.* The alternative was to stay out of the stream of life and go backward.

Progress or Regress

Life has a quick way of disposing of the non-participant in the area of work or leisure. It must be emphasized that to keep awake intellectually, man must keep awake physically. No matter what social position or income a person has, it is a fact that life has a quick way of disposing of non-workers and non-toilers. Senile dementia is much more prevalent among stupid individuals than it is among brilliant ones. A brain which never has been used to its utmost capacity is much more likely to atrophy than is a brain which has been employed to its fullest extent.

The application of the abuse of rest to the problem of leisure time is obvious. Recreation should mean participation, adapted to strength and age, but participation. Rocking-chair sitting before the radio and television is not enough. Motion pictures, where others act, is not enough. Getting second-hand thrills in race-track gambling and betting is not enough. Sitting in stadia watching sports is not enough. Recreation means *staying in the game.*

Conclusion

There are abundant activities in the recreation field to meet the capacities and interests of all. While all observation or watching is not condemned, it means death to be locked on the spectator level; first spiritual and then physical. To rest is not to conquer, and to rest is not to enjoy full happiness.

I'M JUST A STEERING WHEEL

I'M JUST A WHEEL. A steering wheel. And you're my captain. Behind me you're the lord and master of a miracle. You can make me take the kids to school. You can turn me down the sunny road toward town. With me you can guide your goods to the market place . . . you can rush the sick to be healed . . . you can go in minutes to places hours away. You can do magic.

Yet, in the blink of an eye, in the tick of your watch, I can turn deadly killer. I can snuff out the life of a kid still full of life—I can twist a smile into tears. I can wreck and cripple and destroy. I can deal out death like the plague. And I'm no respecter of persons. A child, a grandmother, even you, my friend . . . it's all the same to me.

I'm sensitive. I respond instantly to the hands you give me. Give me calm hands, steady hands, careful hands . . . and I'm your friend. But give me unsteady hands, fuzzy-minded hands, reckless hands . . . then I'm your enemy, a menace to the life, the happiness, the future of every person, every youngster riding, walking, playing.

I was made for pleasure and usefulness. Keep me that way. I'm in your hands. I'm just a steering wheel. And you're my captain. Behind me you're the lord and master of a miracle . . . or a tragedy. It's up to you.

SAFETY EDUCATION DIVISION
Iowa Department of Public Safety
State Office Building
Des Moines, Iowa

Women are like baseball umpires—they make quick decisions, never reverse them and they don't think you're safe when you're out.

These days there are too many people in too many cars in too much of a hurry going in too many directions to nowhere for nothing. —The Kernel.

The Role and Scope of Audio-Visual Materials In Physical Education

John A. Friedrich

AUDIO-VISUAL MATERIALS are being used more and more extensively for educational purposes. The large majority of our high schools today have and use motion picture projectors, and the trend is increasing.[1] Many physical educators are aware of the numerous types of audio-visual materials available. Nevertheless, more extensive and effective use of such materials can and should be made.

There are many ways of organizing the content of the physical education program. Learning by doing will undoubtedly continue to be the basic learning process. In learning physical education skills, attitudes, appreciations and knowledges, *actual experience* in the activity provides the best media through which effective, meaningful, and permanent learning can take place. Such direct learning experiences should be preceded by a period of preparation and should involve a follow-up process for best results. In conjunction with all of the actual learning experiences associated with physical education, many tools may be employed to enhance the total learning situation.

Values

Audio-visual materials, properly used, increase learning and speed up the learning process.[2] This has been substantiated through numerous experiments, both during World War II and in more recent years. *More can be learned by seeing a skill performed than by hearing it explained; and still more can be learned by combining the two, seeing and hearing.*

By making use of audio-visual materials in the teaching of physical education, we can much more effectively portray certain factors vital to the learning experience. Not only skills, but attitudes, knowledges, and appreciations as well are more readily established and fostered through proper usage of these learning aids and techniques. Verbal presentations are usually inadequate since students lack the necessary previous experience to properly benefit from such an approach. The use of effective audio-visual materials can frequently provide much clearer concepts and much fuller understanding. The entire scope of an experience can be increased by proper employment of audio-visual techniques and materials.

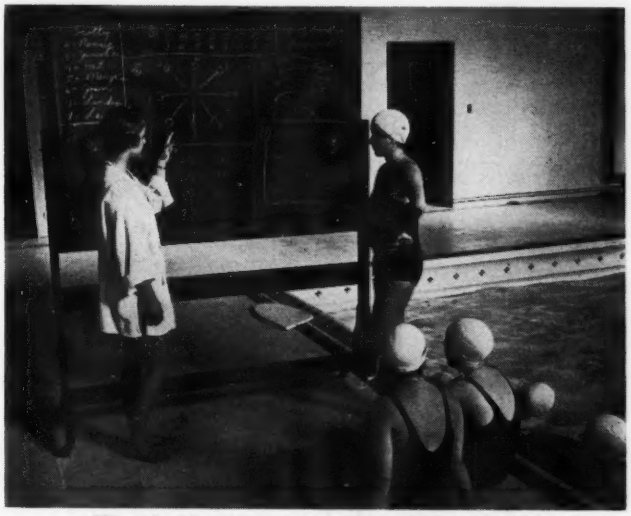
Audio-visual materials and methods tend to improve attention and promote better understanding through clearer presentation. They add variety to the methods of approach. They encourage and develop interest. They aid retention and show interrelationships. They serve to motivate the learner and they provide a common denominator of experience.

One of the main values of audio-visual materials in the field of physical education is that they are applicable to the large group instruction which is so often necessary in physical education teaching situations. Films and other audio-visual materials are graphic, understandable and usually clear to see. They appeal to the student's senses and they tend to motivate him to the extent that more learning, physically, mentally and socially, can occur.

Teaching of appreciations is enhanced when the printed word is reinforced by pictures and explanations. This is illustrated by most rule books for sports today which have incorporated diagrams and

[1] Federal Security Agency, "Movie Projectors in Public High Schools", Pamphlet No. 109, 1949, Washington, D. C., 16 pp.

[2] Ibid p. 2.

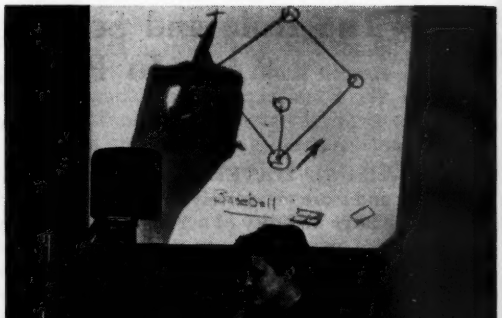


The blackboard is a valuable aid to Physical Education Instruction.

emblematic pictures thus making the material more colorful and effective.

An important consideration relating to the role of audio-visual materials in physical education concerns *verbal symbols*. These refer to words, their meaning, and their implications. In most cases a few well chosen words may be just the thing needed to effect the desired learning. This is true in conjunction with most types of audio-visual materials. Too much talking inhibits learning; therefore, a minimum amount should be employed.

Today the physical education teacher can bring the entire world of skills, sports and attitudes of healthful living into his classroom or gymnasium at any time the learning situation demands. It is now possible to bring to the student an appreciation of the best in playing skill through films and pictures of leading sports figures. The more complete accomplishment of his learning goals can thus be attained through the media of audio-visual materials.

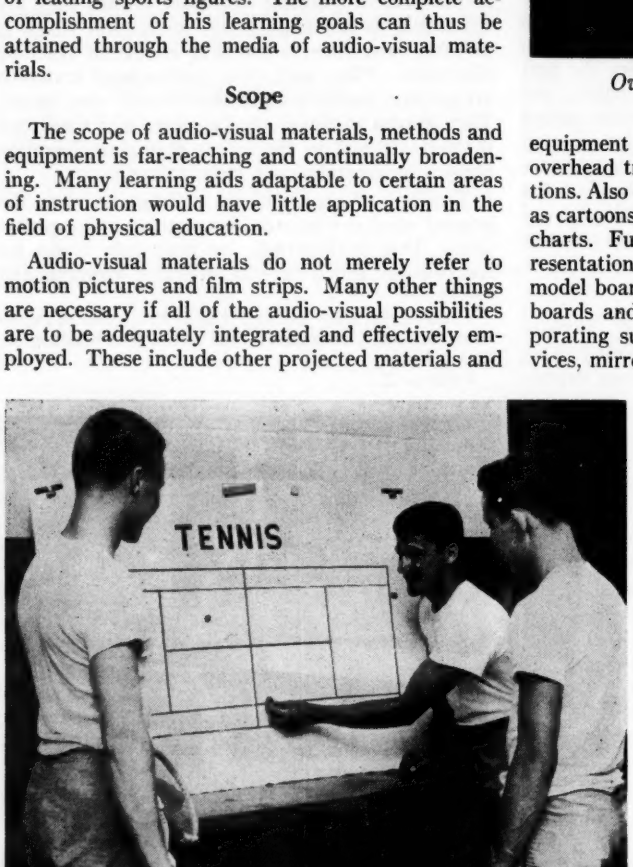


Overhead transparency projection.

Scope

The scope of audio-visual materials, methods and equipment is far-reaching and continually broadening. Many learning aids adaptable to certain areas of instruction would have little application in the field of physical education.

Audio-visual materials do not merely refer to motion pictures and film strips. Many other things are necessary if all of the audio-visual possibilities are to be adequately integrated and effectively employed. These include other projected materials and equipment such as loop films, opaque projections, overhead transparency projections and slide projections. Also included are such non-projected materials as cartoons, posters, drawings, diagrams, graphs and charts. Further possibilities involve the use of representation and display materials which include model boards, flannel boards, chalk boards, bulletin boards and exhibits. Certain other methods incorporating such things as dramatic participation devices, mirrors, sound recorders, radio and television can all be extremely valuable aids to the physical education instructor.



Teaching tennis with the magnetic model board.

The Future

The role of audio-visual materials in physical education is becoming more and more prominent and the scope of materials and equipment adaptable to the area is ever-growing. A finer, broader and richer over-all program could result if every physical educator would become better acquainted with the many techniques, possibilities and avenues of approach provided by the various types of audio-visual materials available today. Perhaps then an educational and public relations program will help bring about the necessary administrative and financial backing to make greater utilization of such media possible.

The "RH" Factor in Education

Lucille Norton

MOST PHYSICAL EDUCATORS, when we chose our professional careers, paid little attention to the "RH" factor of "R"ecreation and "H"ealth. As active sports enthusiasts, our initial interest in the field came through participation in games. We wanted to teach physical education and coach teams. We weren't much concerned about the "RH" factor—*then.*

Remember your undergraduate classes in recreation and health? For the most part, this instruction was simply endured by students. It seemed incidental to the more important business of learning how to teach physical activities. How many of us ever thought *we'd* be teaching recreation or giving instruction in health? We expected to teach "P. E." or "coach."

Then we graduated and accepted our first jobs. Most assignments did not live up to expectations, for the full-time physical education job was rare indeed. Besides physical education instruction, many of us were asked to conduct recreation programs—sometimes community-wide. And almost universally, we were expected to teach health education. Our degree of enthusiasm for these "RH" responsibilities, as compared with that for physical education, was usually evident to the most casual observer. Was it any wonder that the students reflected our attitudes?

The Challenge

Today it is evident that the problems of adequate preparation for recreation and health responsibilities must be faced more realistically. Majors in colleges now need wider training for the job ahead. For it is more than likely that these jobs will include broader responsibilities than teaching physical education.

A recent national survey reveals that a mean average of 60.3% of men and 62.9% of women physical educators have health education duties combined with their physical education responsibility.

Many school superintendents state that the greatest weakness of beginning physical education teachers is their ineffectiveness in health education.

More and more communities, particularly small ones, are organizing community recreation programs and employing members of the physical education staff as recreation leaders.

While many teacher-training institutions are making noteworthy progress toward meeting these needs, too many are satisfied with the status quo. Jogging along in an outmoded pattern, they are failing to fulfill a responsibility to students today—the best possible preparation in all areas of our professional field. The increasing importance of the "RH" factor in Physical Education demands changes in the undergraduate professional program.

The Answer

Let's get out of the old rut and find new methods to meet changing needs. Let's refuse to let practice lag so far behind principle. Curriculum changes need not be costly in time or money. The main requirement is inspired leadership—*ours.*

The questions below suggest some ways of bringing the "RH" factor into sharper focus in the major program. They are by no means exhaustive, but can serve to check your program. Have you taken these beginning steps?

General

1. Do you refer to our major field as Health Education, Physical Education and Recreation—not just Physical Education?
2. Does your college catalog list recreation and health education courses with appropriate descriptive prefixes—not P. E. 121 Personal Hygiene?
3. Does your school provide sufficient courses in *each of the three areas?*
4. Do your professional courses such as Principles, Organization and Administration, Supervision, Evaluation Tests and Measurements emphasize *each of the three areas*—not just Physical Education?

Recreation

5. Does your college offer a recreation course jointly planned and conducted by specialists from other departments such as Art, Music and Speech—not Physical Education alone?
6. Do your major students have an opportunity for practical off-campus experience in recreation leadership with youth and adult groups?
7. Do you recommend to major students that they elect courses in art, music and speech which would be useful in recreation leadership?

Health

8. Do your students have an opportunity for individual health guidance?
9. Are your health education courses made dynamic through activities and experiments—"doing" programs, not just dry lectures?

10. Are you teaching health education and not medicine?
11. Are you teaching health education and not disease?
12. Are you making use of all appropriate community health resources?
13. Are your health education texts and materials up to date?
14. Do your major students have an opportunity for student teaching in health education, as well as in physical education?

Concluding Statement

Perhaps, your department has already taken these beginning steps of emphasizing the "RH" factor in the major program. Some departments have progressed far beyond these basic steps. However, too many are still neglecting these important areas of "R"ecreation and "H"ealth.

To a large extent, our physical education graduates have the entire responsibility for the recreation and health education program in the public schools. It is our responsibility to prepare our major students, not only for these assignments, but also, to accept the fact that these assignments come within the scope of their responsibilities.

For those already in the field, in service training, enrolling in extension classes, and attending short courses or work shops may help strengthen weaknesses in earlier education, to the end that greater contribution may be made to the boys and girls.

Physical Education and the Nursery School

Richard Calisch

THE TERMS "NURSERY SCHOOL" and "day nursery" are often confused or used synonymously. Because of this misinterpretation the educational value of the nursery school is many times slighted by laymen.

The day nursery movement grew up with the growth of the number of mothers gainfully employed during the day. The movement received huge impetus during the war. The working mothers, or mothers who found it necessary to be away from the home during the day needed an institution to which they could, with confidence, entrust their pre-school children. Hence, the growth of the day nursery.

Staffed usually by women, often by mothers, the day nursery presented a play area in which the child could operate at his own level, under supervision, with other children of the same age. The day nursery was established with the aim of providing mothers with good child care during their absence, but may or may not have had educational aims and methods as its foundation. If it did, it became a nursery school.

The nursery school, in order to be generally a school, must have as its *raison d'etre* education, and in keeping with current educational policies, must be staffed by graduates of accredited educational institutions. It must have as its blueprint a working and flexible curriculum frequently revised and cooperatively planned. The equipment and facilities of such a school must be in keeping with the curriculum and aspirations of the school's policy makers. In short, the day nursery may be a play room, a centralized baby sitter, or a backyard, but the nursery school must be an educational institution.

Of course, all is not black and white, and all of the hundreds of pre-school nursery establishments do not fall into one or the other of the two categories; there are many shades of gray. Some day nurseries have educational aims, some "nursery schools" are not nursery schools at all, but merely so call themselves. But for the purposes of discussion we shall limit the definition of the nursery school to "The educational institution for children of pre-school age, in which there is an operating curriculum and a trained staff, both working within the scope of current educational policies."

The Plan

The educational methodology in use within these schools is usually one of *the unit of work*. The units may concern themselves with the holidays, thus presenting a Halloween unit, a Thanksgiving unit, and a Christmas unit; or they may be units such as transportation, the school, manners, and other phases of the life of the 2, 3, or 4 year old child. They may also take other, but similar, forms. A more detailed look at a nursery school day in which one of these units is operating may be of interest to the physical educator.

Play

The children arrive at 9 o'clock usually for a period of outdoor play, the length of which is determined by the weather conditions and other daily factors. In the warm weather the whole school period may be spent outdoors. The activities embraced during this time are the active games, relays, and sports appropriate to the ages of the children. The youngest are usually capable of the simple ring-around-the-rosie type of game; the oldest are probably avid climbers and explorers. Almost all

have some degree of skill in the basic physical skills of running, jumping, hopping, leaping, swinging, rolling, walking, hanging and skipping.

Jungle gyms, teeter-totters, swings, slides and the other familiar pieces of playground equipment are usually in evidence, and becoming increasingly more popular as play ground apparatus are common articles such as barrels, wheels, logs, ladders, and boards, with which the child can create and invent his own activities. It may be said that the whole concept of playground equipment is undergoing a re-appraisal, probably due in part to the invention in Scandinavia of sculptored apparatus. In at least one playground in the U. S. an airplane fuselage is in use as play material. But no matter what the equipment or age of the children, it is true that the primary and fundamental emphasis during the outdoor play is physical activity.

Directed Activity

After the period of outdoor activity is ended the children move into the more formal aspect of the program. It is in this stage of the curriculum that the unit plan is most in evidence. The children gather together to discuss with the teacher the day's activities, then follow with games or dramatic activities designed to center about the unit theme, say, transportation. The room is divided into streets; some children are trains, some busses, still others cars or boats; one may even be an airplane, jet plane, these days. The game proceeds in a flurry of noise, each child imitating his particular mode of transportation. There are inevitable collisions and scrapes, the room is a mass of activity, at the back of which is the guiding hand of the teacher. It may be safely said that more learning takes place at this level through guided physical activity than through any other form of teaching.

Relaxation and Rest

Following this hectic time, maybe a transportation story or other quiet, restful activity; some sort of refreshment, usually fruit juice, and/or a rest period during which the children are toileted. Music or more games may follow, all oriented toward the unit plan. In connection with music the children may enjoy rhythms, an early form of dance, or dramatic activities. At the end of the morning, lunch may be served, followed by a nap for the children. The afternoon session follows much the same pattern. It can be seen from this brief description that the nursery school is fundamentally concerned with teaching through the means of physical activity, an area that we in physical education have traditionally considered as our own. Why then is there so little connection between the two fields?

The Problem

In the past decade there has been much pressure on physical education institutions to encourage interested students to enter elementary school physical education. A great many have done so, and the number of elementary teachers who are specialists in physical education has increased. The number of men in this area is not large, but more and more are entering the elementary field. The outlook for elementary school physical education is good; this is not the case with the nursery school.

The nursery school movement has become recognized in the colleges. Departments of Childhood Education have been installed to educate prospective nursery school teachers in the many subject areas encountered in the nursery school, including music, art, dance, and physical education.

The physical education colleges have been slow, however, to perceive the necessity of correlation between the teacher education institutions and the nursery school. Physical education teacher education extends its aid down through the elementary years, but no attention has been paid to the pre-kindergarten child. The field of games, relays, dance, rhythms, and basic physical skills is being handled at this level, sometimes most competently, by the class-room teacher, rather than by cooperative effort of that teacher and a specialist. Physical educators have deplored this arrangement at the elementary level; why not, then, at the nursery level?

The number of nursery schools has grown to sufficient proportions to warrant attention by the colleges; the number of children affected has swelled greatly during the years since the end of World War II. It is time for the colleges of physical education to begin educating students, women and men, to teach at the nursery school level.

A Plan

What is needed is a national conference between leaders of the two fields designed to determine the needs of the nursery school in terms of physical education, and the needs of the physical education teacher education programs in terms of the nursery school. Such a discussion would open the way for the extension in the colleges of the program so that physical education students might elect secondary, elementary or nursery specialization.

Also necessary is an increased "advertising campaign" to interest students, especially men, to take up nursery education. Space in bulletins and circulars should be devoted to the nursery preparatory program of these colleges, especially as it pertains to the physical education specialists. An effort by advisors and teachers to select qualified, interested students for these programs on the basis of a series of criteria set up by nursery and physical education people jointly is also in order.

Conclusion

As the field of education grows at both ends, as the scope of teaching extends toward the adult level

and toward the infant level, it is necessary that the areas of specialization like our own keep abreast of the extension in order that they not fall behind and lose the ground gained in the battle for recognition which has been fought over the years. We well recognize that as education extends its blessing to include specialized groups the areas of education concerned must extend their boundaries to take in these groups. As the nursery movement gains impetus it is necessary that physical education be receptive to that gain and prepare its teachers to better meet the challenge presented by the needs of the pre-kindergarten child.

Posture and Body Mechanics in the Normal Individual

Randolph W. Webster

THE TERMS POSTURE AND BODY MECHANICS have been discussed so many times and have been studied by doctors, nurses, teachers and other professional people, that it is doubtful if anything completely new can be presented in this area. Posture, however, is a very important subject, since it is directly related to mental and physical health of individuals. One should, therefore, welcome every opportunity to learn new facts or even to review well known information for purpose of emphasis.

Definition

What is posture? What are the advantages and disadvantages of the upright posture. These and other questions need to be answered in order to gain even an elementary knowledge of this term.

Posture may be defined as the active conformance of an organism to the environment for the maintenance of position. Or, as Stone and Dayton define it,

> "...good posture means proper alignment of the body, in standing, sitting, and lying positions and in movements of the body with ease, grace, and efficiency. It presupposes the ability of an individual to make frequent changes in position necessary to life situations, and to assume those positions with a minimum of effort and maximum results."

The Upright Posture

It is interesting to think through, in a developmental way, the advantages and disadvantages of the upright posture. This position, is a distinct advantage over the four-footed posture in that the head being raised, the line of vision is higher and may be used to a greater advantage. The upper extremities are free from the responsibility of support and may perform many different kinds of acts. Also different methods of walking and running and at greater speeds are possible with this position.

There is, however, at least one disadvantage to the upright posture. The position raises the center of gravity over a decreased base and changes the alignment of the spine in relationship to the pelvis. Other changes are noted but it is difficult to say whether they are advantages or disadvantages. They are such changes as the position of the abdominal viscera, habits of breathing and change in circulatory demands.

The spine is the keystone in the structure of the body and whatever affects it, influences posture and body mechanics. Each postural deviation has its cause and effect. The deviation will disappear if the cause is found and removed. The spine has several specific functions, the understanding of which should aid professional people in the teaching of posture and body mechanics. They are as follows:

1. For support of trunk, head and upper extremities.
2. For attachment of muscles, anchoring and controlling the pectoral girdle; also the latissimus dorsi which moves the shoulder joint.
3. For protection of the spinal cord and nerves which lead to and from it.
4. For absorption of jolts and jars which come to the body through daily activities.[2]

The two principal demands on the spine are, therefore, strength and flexibiity. Anything which disturbs or interrupts the proper functioning of the spine affects the normal posture of the individual.

There are many causes of poor posture, some functional, some structural. A few are as follows:

1. Functional
   a. Malnutrition, underweight, overweight
   b. Fatigue, mental and physical
   c. Faulty eyesight and hearing
   d. Poor environmental conditions, such as poor lighting or type of work which forces the individual to remain in abnormal position for long periods of time.
   e. Abnormal height
2. Structural
   a. Lordosis
   b. Scoliosis
   c. Kyphosis
   d. Many other structural and some organic defects.

The distinguishing features of the normal type posture are as follows:

[1] Eleanor B. Stone and John W. Dayton, *Corrective Therapy for the Handicapped Child.* New York: Prentice Hall, 1951, p. 111.

[2] M. Gladys Scott, *Analysis of Human Motion,* New York: F. S. Crofts and Company, 1942 pp. 332 and 333.

1. The line of gravity passes from back of the ears through hip and knee joints and in front of the ankle joints equally distributing the body weight between the heels and the balls of the feet giving antro-posterior balance in standing and with no muscular strain.
2. The head is level, the thoracic curve is slightly rounded backward, the lumbar curve is slightly rounded forward and there is no lateral deviation of the spine.
3. The angle of the pelvic obliquity is approximately 55°.[3]

Dynamic Posture

There are other features of posture besides maintenance of position for standing, walking, sitting or lying. In work or play the body needs to be prepared for a position of action. This may be called dynamic posture. The stance of a golf player addressing a ball on the tee, the position of a tennis player serving a ball, the stance of a bowler delivering a ball down the alley, the operator of a drill press in a factory, the coal miner loading coal in a mine, all are examples of dynamic posture, or body positions in various forms of activities.

Body Mechanics

Every activity calls for a particular body posture—a position for action. The actual participation in an activity is body mechanics. Body mechanics may be defined as the mechanical correlation of the skeletal, muscular, and visceral systems and other related systems of the body. Normal body mechanics is said to be maintained when this mechanical correlation is most favorable to the functions of these systems. This is the most efficient and scientific way of performing a physical activity. This scientific way of performing a physical activity may not always be compatible with good standing, walking and sitting posture, because of athletic, occupational (and others), habits of performance. For example, in football the slouch position of a quarterback calling signals behind the line of scrimmage, waiting to receive the ball from the center, is good dynamic standing posture for football but not for regular standing position. The worker who must lift loads with his hands as the farmer or miner develops a posture peculiar to his work and is good dynamic posture if he has been taught to work efficiently but it is not good regular body posture.

In work or play certain muscles are used more than others. This means they become stronger and the opposing muscles become weaker. Unless compensating exercises are taken daily to relax the strong muscles and to strengthen the weak ones, certain structural changes will occur to affect the posture of the individual due to the continual pull of the strong set of muscles in one direction. Greater emphasis needs to be placed in our schools today upon the importance of compensating activities. Many times in sports a person will play golf in the summertime and bowl in the winter, all right handed, employing many of the same muscles. Not infrequently this player complains of back ailments, much of which could be eliminated if he took compensating exercises and played different sports which employed another set of muscles.

Many postural defects, body ailments, and strain can be traced to the manner of living or performance of activities. There is the poor posture of the shoulders which can be caused by simple every day activities such as reading a book, sewing, or writing where the arms are held forward by the continuous contraction of the pectoralis major and minor and the serratus muscles, while the levator, rhomboid and the trapezius are relaxed permitting the scapula to move forward. Other examples which affect posture and bring about varying degrees of deformity are the overdeveloped arm of the baseball pitcher, the deviated spine of the news boy who carries papers on only one shoulder, the pupil who carries books in only one hand, the handball player, and the wrestler, boxer, and basketball player; all exercise and overdevelop certain muscles which affect their posture. People generally are not aware of the importance of finding the most efficient way of performing an activity, of learning what to do for poor posture and body mechanics, and how to perform compensating exercises.

Things to Remember

Both good posture and body mechanics depend upon a number of things:

1. Proper body alignment, particularly of the spinal column.
2. Balance of various body segments.
3. Kinesthetic sense—the feeling that one is achieving muscular movement, balance, weight and position.
4. Muscle tone—the healthy state of tension and vigor or normal muscles.
5. Relaxation—a lessening of tension.
6. Emotional and mental attitude.

This discussion of posture and body mechanics in the normal individual has been confined to a general approach to the problem. For a more complete analysis of the subject, each of the items must be studied as exhaustively and objectively as possible.

[3] Walter Truslow, *Body Poise*, Baltimore: The Williams & Wilkins Co., 1943 pp. 167 and 168.

If at first you don't succeed, that makes you about average. —National News.

The queerest things in all the earth are those queer things which cause us mirth.

An Answer*

Russell Coffey

To: Benjamin Ploatinus,
Chairman, English Department

Re. Paul Spindles, Rhodes Candidate

Dear Doc:

Your letter has just been brought to my attention and I want to assure you that we will do all in our power to cooperate with you in preparing your man in advanced exploration of the English language. We are fully aware that the years of study between Nursery School and Graduate School, about twenty-one years, are all too short to master the English language, and that three more years as a Rhodes scholar would be desirable. By that time one should be able to read "Piers Plowman" with pleasure and understanding.

If we are to coach Mr. Spindles he should have an athletic name. Could we refer to him from this time on as "Ole Toll Rhodes"? We thought this name would be more apropros than "Spindle Shanks" because we dislike puns built around proper names. We added the name "Toll" because "Spindles" will pay in the end.

Our staff has agreed to work "Old Roads" in our backfield whenever he shows up and provided, of course that he is anatomically in one piece. That we have four regular backs, plus "Old Roads", will hardly be noticed as we have had five backs in our backfield just about all of last season. "Ole Roads" will be expected to get down behind Miljewski, our regular center, and when the ball is snapped he is to plow forward.

We are sure that "Roadsie" will learn to love the dirt, the mud, the water, the snow, as well as the cheers and boos that so often come from the Faculty Section of the stadium. Will you please ask him to study the techniques of our All-American quarterback Gram Cracker? Gram stands directly behind Miljewski and bends over, then he stands tall and erect and after taking one or two whiffs of air he bends over and sends the team into action. His technique has been reviewed through a study of game movies and we have questioned him about it. Gram, who is a very honest lad, says the air one breathes following Miljewski and the six other Mules who belong to the Athletic Department is just about the same as that which is wafted from the stands, the Chemistry Department, The Psychology Department, or the English Department. This confirms our opinion that everything around a University is not "Roses".

You have asked "how does a football bounce"? As they so often say in the English classes "that is the $64,000,000 question." It has been known to bounce a coach and team into the Rose Bowl and soon after out of a job. That is a crazy way for a "prolated spheroid" to perform, and we would advise "Roadsie" to keep his hands off the ball and just plow and plow some more. The plowing is what makes football such a nice game and so easy for the student body and faculty to understand.

Our staff is always busy on days when games are played, some are scouting, some just trying to get that extra point after touchdown. Our trainer would like to have you send a graduate assistant from the English Department to help gather up "Ole Roadsie's" pieces. The students will give him a "'Roadsie,' 'Roadsie,' He's a Jolly Good Fellah" yell. The faculty will know that with a broken leg he will hardly be able to make his eight o'clock the next morning. He will, of course, be excused if he presents a "white paper" signed by the trainer, the nurse, the doctor, the dean of men, and, of course the Coach.

I am sure he will profit by his football experience. His vocabulary is bound to improve because deep in the mud, the slime, and playing behind Miljewski, he is going to hear some words he has never heard before. In two weeks he will be using these words in both spoken and written English. This should help him in communications, especially if his stipend happens to be late. Perhaps he may be able to title his research "Swearing as a Fine Art".

We agree that cooperation has all too often been a dead end street and we expect "Whats his name" over to practice and who knows—you may find parts of him in the "salad bowl", the "orange bowl" or some other dish where our Alumni and Faculty are always tossing us.

Sincerely yours,

Coach Musselman.

P.S. You may gather from this letter that we only want our men to sit on the end of the "English Bench". Never have we asked for anyone to play on your first team.

"Muscles" Musselman.

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* Dr. Coffey has answered the letter printed in the March issue under "Does Every Coin Have Two Sides?" from *College English*, April 1955.

Fathers are what give daughters away to other men who aren't good enough for them . . . so they can have grandchildren that are smarter than anybody's. —Kernels.

Whenever a crisis develops in Europe, your Uncle Sam is left in possession of it.

Occasionally a candidate who denounces special privilege tries to get some of it.

Notes on Two Items of Terminology

Norma D. Young

Big-muscle Activity

PHYSICAL EDUCATION is not infrequently defined, in part, as education through big-muscle activities. Activities usually conducted in gymnasiums, in swimming pools, and on playing fields are usually considered to be big-muscle activities. Activities usually conducted in classrooms and in laboratories are, presumably, small-muscle activities.

Baseball, swimming, and the shot-put, and such exercises as floor push-ups, rising on the toes, side bends, and stiff-leg dead lifts are probably classified as big-muscle activities. Let's briefly consider the activities one by one in an effort to determine the basis for the classification.

A baseball catcher uses such muscles as the palmaris brevis, the flexor pollicis brevis, the adductor pollicis, the interossei, the lumbricales, and the flexor digiti quinti brevis. Big muscles? A swimmer performing the breast stroke uses such muscles as the pronatores quadrati. Big muscles? A shot-putter uses such muscles as the gemellus superior, the gemellus inferior, the quadratus femoris, the obturator externus, the obturator internus, and the pyriformis. Big muscles?

In executing floor push-ups a performer uses such muscles as the anconei. Big muscles? In rising on the toes a performer uses such muscles as the extensores hallucum and the extensores digitorum breves. Big muscles? In executing side bends a performer uses such muscles as the intercostales and the intertransversarii. Big muscles? In executing stiff-leg dead lifts a performer uses such muscles as the interspinales and the rotatores. Big muscles?

The biceps brachii, the brachialis, the deltoideus anterior, and the coracobrachialis would probably qualify as big muscles. They are used in picking up a book. Small-muscle activity? The tricipites brachiorum, the iliocostales, the longissimi, and the spinales would probably also qualify as big muscles. They are used in playing the piano. Small-muscle activity?

Physical-education Activity

Education is not sandwiched into the expression *mental activity*. Why is it so sandwiched into *physical activity?* The answer that physical activity can be either educational or noneducational is unsatisfactory. Mental activity can also be educational or noneducational. And education can be either good or bad!

Physical-education activity, instead of simply *physical activity,** is in all probability the result of the jargon that has developed in the literature. Fifty years ago, perhaps, if a gym class engaged in a game of basketball, the class probably just played basketball. As educational theories developed, playing basketball in the gym class became, variously, a project, a unit of work, and an activity. Then when these expressions seemed no longer educationally adequate, playing basketball in the gym class became the basis of an integrated program: indeed the game of basketball was played within a certain framework of reference, and implemented into an orchestration of gown-and-town activities. And I imagine that the same game of basketball was being played throughout.

Although researchers and workers applying the results of researches stress, on the one hand, the value of the scientific method, they appear, in reporting their efforts, to be willing to sacrifice the quality of precision inherent in the scientific method.

*Yes, I am aware of the psychosomatic unity and of the multifarious controversies waged because of it. I suppose that the body of a boy does not, without the mind of the boy, go to a playing field. I think, however, that I have seen many a boy whose body was in the classroom but whose mind was on the playing field!

Editor's Note:

It is not uncommon to find that many writers of professional papers and books apparently overlook the fact that good professional writing requires that there be first some clear thinking. Both the thinking and the writing are dependent on a command of language, and one of the essentials of this command is clarity and exactness of terminology. Some of the terms commonly used by physical educators might be called "omnibus words," for they "carry so many unknown passengers." Far too many expressions sound good when first used, but when carefully examined will not stand up under the scrutiny: they break down simply because they are at variance from the realities which they are supposed to represent. Would it not be worth while for us to begin to clean house and hunt out such nonfactual terms, and supplant them with others that are representative of what they are trying to express.

We here present two such examples: won't the readers provide us with others, presented in the same kind of abbreviated form

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You can preach a better sermon with your life than with your lips.

A Classified List of Current Periodicals in the Fields of Athletics, Health, Physical Education, and Sports Published in the United States and Canada

Aletha B. Redman

This is a second and concluding part of the list prepared by Mrs. Redman. Readers are urged to study the "Note of Explanation" at the beginning of the article on page 14 of the March issue.

Better living. 1951. m. 5c per no. (Printed in five editions: Central, Eastern, Southern, Western, Canadian. On sale at stores operated by members of the Super Market Institute) Mass Market Publications, Inc., 230 Park Ave., New York 17, N. Y.

Borden's review of nutritional research. 1940? m. (Sept.-June) Price not given. Borden Co., 350 Madison Ave., New York 17, N. Y. abstr. bibl. index.

Canadian dietetic association. Journal. 1940. 4 times a year. $2. Current Publications, Ltd., 9 Duke St., Toronto 2, Ontario, Canada. abstr.

Food research. 1935. bi-m. Membership (non-members $8.50) Institute of Food Technologists, 178 W. Adams St., Chicago 3, Ill. bibl. charts. index. cum. index: v. 1-12 (1936-1947) Indexed: Agri.Ind. Biol. Abstr. Chem.Abstr. Nutr.Abstr. Q.C.Ind.Med.

Food technology. 1939. m. Membership (non-members $8.50) Institute of Food Technologists, 176 W. Adams St., Chicago 3, Ill. abstr. bibl. bk.rev. charts, index. Indexed: Agri.Ind. Biol.Abstr. Chem.Abstr.

Forecast for home economists. 1910. m. (Sept.-June) $3. Forecast Publishing Co., 6 E. 39th St., New York 16, N. Y. bk. rev. illus. Indexed: P.A.I.S.

Gastroenterology. 1943. m. $4 per vol. (3 vols. a year) Williams and Wilkins Co., Mount Royal and Guilford Aves., Baltimore 2, Md. abstr. bibl. bk. rev. illus. Indexed: Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Nutr.Abstr. Q.C.Ind.Med.

Gourmet. 1941. m. $5. Gourmet, Inc., Penthouse, Hotel Plaza, New York 19, N. Y. illus. index.

Journal of biological chemistry. 1905. m. $6 per vol. Williams and Wilkins Co., Mount Royal and Guilford Aves., Baltimore 2, Md. illus. index. cum. Index: v. 11-125 (1905-1938) (in 5 vols.) Indexed: Abstr. Bull. Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Nutr. Abstr. Q.C.Ind.Med.

Journal of home economics. 1909. m. (Sept.-June) $6. American Home Economics Association, 1600 Twentieth St., N. W., Washington 9, D. C., abstr. bk.rev. illus. index. Indexed: Agri.Ind. Biog.Ind. Biol.Abstr. Chem.Abstr. Educ.Ind. Nutr.Abstr. P.A.I.S. Psycho.Abstr. Q.C.Ind.Med.

Journal of milk and food technology. 1937. m. Membership (non-members $5.50) International Association of Milk and Food Sanitarians, Inc., 12½ Ritz Bldg., P. O. Box 437, Shelbyville, Ind. bibl. bk. rev. charts. illus. index. Indexed: Agri.Ind. Biol.Abstr. Chem.Abstr.

Journal of nutrition. 1928. m. $7.50 per vol. (3 vols. a year) Wistar Institute of Anatomy and Biology, 36th St. and Woodland Ave., Philadelphia 4, Pa. bibl. index. cum. index: v. 1-15 (1928-1938); v. 16-36 (1938-1948) Indexed: Agri.Ind. Biblio.Ind. Biol. Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. Q.C. Ind.Med.

Nutrition reviews. 1942. m. $4. Nutrition Foundation, Inc., Chrysler Bldg., New York 17, N. Y. abstr. bibl. bk.rev. index. Indexed: C.L.Med.Lit. Chem. Abstr.

Practical home economics. 1929. m. (Sept.-June) $3. Scholastic Corp., 33 West 42nd St., New York 36, N. Y. bibl. bk.rev. illus. Indexed: Educ.Ind. P.A.I.S. R.G.

Vegetarian news digest. 1948. q.? $1 for 6 nos. 2146 Branden St., Los Angeles 26, Calif. bk. rev.

What's new in home economics. 1936. m. (Sept.-June) $4. Harvey and Howe, Inc., 919 N. Michigan Ave., Chicago 11, Ill. bk. rev. illus.

Yeast; dried yeasts and their derivatives. 1948. irreg. Price not given. Dried Yeasts and Derivatives Dept., Anheuser-Busch, Inc., St. Louis 18, Mo. bibl charts. illus.

HEALTH EDUCATION

Safety, Training, Etc.

American journal of hygiene. 1921. bi-m. $12. Johns Hopkins Press, Baltimore 18, Md. bibl. illus. cum. Index: v: 1-28 (1921-1938) Indexed: Biol.Abstr. C.L. Med.Lit. Chem.Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

American journal of public health and the nation's health. (issues year book) 1911. m. $10. American Public Health Association, 1790 Broadway, New York 19, N. Y. bibl. bk. rev. charts. illus. index. Indexed: Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Eng.Ind. Int.Ind. Nutr.Abstr. P.A.I.S. Psycho.Abstr. Q.C.Ind.Med.

Better times. 1919. w., except 2nd Friday in June to 3d Friday in Sept.) $3.50. Welfare and Health Council of New York City, 44 E. 23rd St., New York 10, N. Y.

Body moderne. 1946. bi-m. $3. per 12 issues. Walter F. Baptiste, Publisher, 48 Golden Gate Ave., San Francisco, Calif.

Canadian journal of public health; the national journal of preventive medicine. 1910. m. $3. Canadian Public Health Association, 150 College St., Toronto 5, Ontario, Canada. abstr. bibl. bk.rev. charts. index. Indexed: Biol.Abstr. C.L.Med.Lit. Can.Ind. Chem. Abstr. Lab.Ind. Nutr.Abstr. Q.C.Ind.Med.

Cancer news. 1947. q. Free. American Society, Inc., 47 Beaver St., New York 4, N. Y. illus. index.

Cancer research. (American Association for cancer research) 1941. m. $12.50. University of Chicago Press, 5750 Ellis Ave., Chicago 37, Ill. abstr. bibl. bk.rev. charts. illus. Indexed: Biol.Abstr. C.L.Med. Lit. Chem.Abstr. Q.C.Ind.Med.

Family; a digest for better health. 1953. m. 10c per copy. (Sold in drug stores only) Family Digest, Inc., 431 Hudson St., New York 14, N. Y.

Good health. (Race betterment foundation) 1866. m. $1.75. Good Health Publishing Co., Battle Creek, Mich.

Harvard public health alumni bulletin. 1944. 3 times a year. Membership. Harvard Public Health Alumni Association, 55 Shattuck St., Boston 15, Mass. illus.

Health; Canada's national health magazine. 1933. bi-m. $1. Health League of Canada, 111 Avenue Rd., Toronto 5, Ontario Canada. bibl. bk. rev. illus. Indexed: Can.Ind.

Health bulletin for teachers. 1929. 4 times a year. Free. Metropolitan Life Insurance Co., School Health Bureau, Welfare Division, Newark, N. J. Indexed: P.A.I.S.

Health center journal. 1947. irreg. Free. Ohio State University, College of Medicine & College of Dentistry, Columbus, Ohio.

Health culture. 1894. m. $3. Alice L. S. Turner, Publisher, 1133 Broadway, New York 10, N. Y.

Health yearbook. 1943. a. $4.50. Stanford University Press, Stanford, Calif.

Journal of health—physical education—recreation. 1896. m. (Sept.-May) American Association for Health, Physical Education and Recreation, 1201 16th St., N. W. Washington 6, D. C. bibl. bk. rev. illus. index. Indexed: Educ.Ind. Q.C.Ind.Med.

Journal of school health. 1927. m. (Sept.-June) $3. American School Health Association, 3335 Main St., Buffalo 14, N. Y. abstr. bk. rev. index. Indexed: Educ.Ind. Psycho.Abstr.

Journal of social hygiene. 1914. m. (Oct.-June) $3. American Social Hygiene Association, 1790 Broadway, New York 19, N. Y. bibl. bk. rev. illus. index. cum.index: v. 1-21 (1914-1936) Indexed: Biol.Abstr. Int.Ind. P.A.I.S.

Let's live. 1933. m. $2.50. Godfrey Thomas Publishing Co., 1133 N. Vermont Ave., Los Angeles 29, Calif.

Life and health. 1885. m. $2.75. Review and Herald Publishing Association, Takoma Park Station, Washington, D. C.

Nature's path. 1896. m. $3. Benedict Lust Publications, 343 Lexington Ave., New York 16, N. Y.

Occupational hazards. 1938. m. Free. Industrial Publishing Group, 1240 Ontario St., Cleveland 13, Ohio.

Oficina sanitaria panamericana. Boletin. (Text in Spanish, Portuguese, French and English) 1922. m. $5. 1501 New Hampshire Ave., Washington 6, D. C. abstr. bibl. illus. index. Indexed: C.L.Med.Lit. Chem.Abstr. Q.C.Ind.Med.

Pest control. (National pest control association) 1933. m. $4. James A. Nelson, Publisher, 1900 Euclid Ave., Cleveland 15, Ohio. illus. Indexed: Biol.Abstr. Chem. Abstr.

Prevention; devoted to the conservation of human health. 1950. m. $4. Rodale Press, 6th and Minor Sts., Emmaus, Pa.

Public health reports. 1878. m. $4.25. Superintendent of Documents, Washington 25, D. C. bibl. illus. stat. index. Indexed: Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Ind.Arts. Nutr.Abstr. P.A.I.S. Psycho.Abstr. Q.C. Ind.Med.

Religion and health. 1952. m. $3. Religion and Health Corp., Box 4802, Duke Station, Durham, N. C.

Safety maintenance and production; dedicated to accident prevention, maintenance, health conservation and fire control for efficient production. 1901. m. $4. Alfred M. Best Co., Inc., 75 Fulton St., New York 38, N. Y. illus. index. Indexed: Eng.Ind.

Sanitarian. 1938. bi-m. $5. National Association of Sanitarians, P. O. Box 24625, Los Angeles 24, Calif.

Successful living. 1932. bi-m. $1 for 2 years. Successful Living, Inc., 683 Broadway, New York, N. Y.

Today's health. 1923. m. $2.50. American Medical Association, 535 N. Dearborn St., Chicago 10, Ill. bk.rev. illus. index. Indexed: Chem.Abstr. P.A.I.S. Psycho.Abstr. R.G.

Tomorrow's man. 1952. m. $2.50. Irvin Johnson, Publisher, 22 E. Van Buren St., Chicago 5, Ill.

Western public health. 1947. q. $1.50. Western Branch, American Public Health Association, School of Public Health, University of California, Berkeley 4, Calif.

World health organization. Bulletin. (Editions in English and French) (Issues Supplements) 1947/48. q. $6. Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N.Y. Indexed: Biol.Abstr. C.L.Med.Lit. Psycho. Abstr. Q.C.Ind.Med.

Your life. 1937. m. $3. Kingsway Press, Inc., 270 Park Ave., New York 17, N. Y.

HEATING, VENTILATING, LIGHTING

Air conditioning and refrigeration news. 1926. w. $6. Business News Publishing Co., 450 W. Fort St., Detroit 26, Mich. illus. pat. stat. tr. lit.

Air conditioning, heating and ventilating, 1904. m. $3. The Industrial Press, 93 Worth St., New York 13, N. Y.

American artisan; residential air conditioning, warm air heating, sheet metal contracting. 1864. m. $3. Keeney Publishing Co., 6 N. Michigan Ave., Chicago 2, Ill. illus. Indexed: FuelAbstr.

Domestic engineering, plumbing, heating and air conditioning. 1889 m. $5. Domestic Engineering Co., 1801 Prairie Ave., Chicago 16, Ill. illus. pat. tr. lit. Indexed: Eng.Ind. Ind.Arts.

Heating, piping and air conditioning (including Journal section of the American Society of Heating and Ventilating Engineers) 1929. m. $3. Keeney Publishing Co., 6 N. Michigan Ave., Chicago 2, Ill. bibl. bk.rev. illus. tr. lit. Indexed: Chem.Abstr. Eng.Ind. FuelAbstr. Ind.Arts.

Heating, plumbing and air conditioning age. 1923. m. $5. Age Publications, Ltd., 31 Willcocks St., Toronto 5, Ontario, Canada. illus. tr. lit.

Illuminating engineering. 1906. m. $12. Illuminating Engineering Society, 1860 Broadway, New York 23, N. Y. bibl. illus. index. Indexed: Abstr. Bull. Chem.Abstr. Eng.Ind. Ind.Arts. Photo.Abstr. Psycho.Abstr. Sci.Abstr.

Southern plumbing, heating and air conditioning. 1946. m. $2. Allen W. Hill Publishing Co., 72 Eleventh St., N. E., Atlanta 5, Ga.

HYGIENE (Industrial)

A.M.A. Archives of industrial health. 1950. m. $8. for 2 vols. American Medical Association, 535 N. Dearborn St., Chicago 10, Ill. abstr. bk.rev. charts. illus. Indexed: C.L.Med.Lit. Ind.Arts. Q.C.Ind.Med.

American industrial hygiene association quarterly. 1939. q. $2. 605 N. Michigan Ave., Chicago 11, Ill. bibl. illus. Indexed: C.L.Med.Lit. Chem.Abstr.

Industrial health review. 1949. q. Price not given. Industrial Health Division, Dept. of National Health and Welfare. Ottawa, Ontario, Canada. illus.

Industrial medicine and surgery; the journal of medicine in industry. 1931. m. $6. Industrial Medicine Publishing Co., 605 N. Michigan Ave., Chicago 11, Ill., bk.rev. illus. Indexed: Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Ind.Arts. Nutr.Abstr. P.A.I.S. Q.C.Ind.Med.

Modern sanitation. 1949. m. $2. Powell Magazines, Inc., 855 Avenue of the Americas, New York 1, N. Y. bk. rev. illus. index.

Occupational hazards. 1938. m. Free. Industrial Publications Group, 1240 Ontario St., Cleveland 13, Ohio. Indexed: Chem. Abstr.

Occupational health. (U. S. Public health service) 1940, m. $1. Superintendent of Documents, Government Printing Office, Washington 25, D. C. bibl. illus.

Wastes engineering. 1930. m. $2. Case-Sheppard-Mann Publishing Corp., 24 W. 40th St., New York 18, N. Y. illus. tr. lit. index. Indexed: Biblio.Ind. Biol. Abstr. Chem.Abstr. Eng.Ind. P.A.I.S.

HYGIENE (Mental)

American journal of mental deficiency. 1896. q. $7. American Association of Mental Deficiency, 372 Broadway, Albany 7, N. Y. abstr. bibl. bk. rev. illus. cum. index: v. 1-15 (1896-1911) Indexed: Biol. Abstr. C.L.Med.Lit. Chem.Abstr. Psycho.Abstr. Q.C.Ind.Med.

American journal of psychiatry. 1944. m. $10. American Psychiatric Association, 1270 Avenue of the Americas, New York 20, N. Y. bibl. bk. rev. illus. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Journal of child psychiatry; neurology and clinical psychology of the child. 1947. q.? $7 per vol. Child Care Publications, 30 W. 58th St., New York 19, N. Y. bibl. charts. illus. index. Indexed: Psycho. Abstr. Q.C.Ind.Med.

Mental health and you. bi-m. 35c per copy. Skye Publishing Co., Inc., 270 Park Ave., New York 17, N. Y.

Mental health bulletin. 1921. Danville State Hospital, Dept. of Community Service, Danville, Pa.

Mental health news. 1940 m. Mental Health Publishing Association of Oregon, Portland, Ore.

Mental hygiene. 1917. q. $6. National Association for Mental Hygiene, Inc., 1790 Broadway, New York 19, N. Y. bibl. bk.rev. index. Indexed: C.L.Med.Lit. Int.Ind. P.A.I.S. Psycho.Abstr. Q.C.Ind.Med.

Nervous child; quarterly journal of psychology, psychotherapy, mental hygiene and guidance of the child. 1941. q. $7. Child Care Publications, 30 W. 58th St., New York 19, N. Y. bibl. bk. rev. index. Indexed: Biblio-Ind. Educ.Ind. Psycho.Abstr. Q.C. Ind.Med.

Neuropsychiatry. 1951. q. Price not given. Dept. of Neurology and Psychiatry, University of Virginia, Charlottesville, Va. bibl. index.

Psychiatric quarterly. 1927. q. $6. State Hospital Press, Utica, N. Y. bibl. bk. rev. charts. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Psychiatric quarterly supplement. 1927. s-a. $3. State Hospitals Press. Utica, N. Y. bibl. bk. rev. stat. index. Indexed: C.L.Med.Lit. Psycho.Abstr. Q.C. Ind.Med.

Psychiatry; journal of the study of interpersonal processes. 1938. q. $8. William Alanson White Psychiatric Foundation, Inc., 1711 Rhode Island Ave., N.W., Washington 6, D. C. bibl. bk. rev. index. Indexed: C.L.Med.Lit. Chem.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Psychosomatic medicine; experimental and clinical studies. (issues Supplements) 1939. bi-m. $8.50. Paul B. Hoeber, Inc., Medical Book Dept., Harper & Co., 49 E. 33d St., New York 16, N. Y. abstr. bibl. bk. rev. illus. index. Indexed: Biol.Abstr. C.L.Med. Lit. Chem.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Quarterly journal of child behavior. 1949. q. $8.50. Coolidge Foundation, 70 Pine St., New York 5, N. Y. abstr. bibl. bk. rev. illus. index. Indexed: Psycho.Abstr.

HYGIENE (Mother and Child)

American child. 1919. bi-m. $2. National Child Labor Committee, 419 4th Ave., New York 16, N. Y. Indexed: P. A. I. S.

Bulletin of maternal welfare. 1954. bi-m. $1. 116 S. Michigan Ave., Chicago 3, Ill.

Child development. 1930. q. $6. Society for Research in Child Development, University of Illinois, 1341 Euclid, Champaign, Ill. bibl. illus. index. Indexed: Biblio.Ind. Biol. Abstr. C.L.Med.Lit. Educ.Ind. Psycho. Abstr.

Child development abstracts and bibliography. 1927. 6 times a year. (Feb.-Dec.) $5. Child Development Publications, Fayerweather Hall, East, Evanston, Ill. abstr. bibl. index. Indexed: Psycho.Abstr. (Processed)

Child-family digest, parent and family relationship. 1949. m. (Sept.-June) $3.50. Lt. Gayle Aiken III. Memorial Foundation, 5320 Danneel St., New Orleans 15, La. bibl. bk. rev.

Mother and baby. 1953. m. $2.50. 202 E. 44th St., New York 17, N. Y. illus.

HYGIENE (Public)

American journal of hygiene. 1921. bi-m. $12. Johns Hopkins Press, Baltimore 18, Md. bibl. illus. cum. index: v. 1-28 (1921-1938) Indexed: Biol.Abstr. C.L. Med.Lit. Chem.Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

American journal of public health and the nation's health. (issues year book) 1911. m. $10. American Public Health Association, 1790 Broadway, New York 19, N. Y. bibl. bk.rev. charts. illus. index. Indexed: Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Eng.Ind. Int.Ind. Nutr.Abstr. P.A.I.S. Psycho.Abstr. Q.C.Ind.Med.

Canadian journal of public health; the national journal of preventive medicine. 1910. m. $10. Canadian Public Health Association, 150 College St., Toronto 5, Ontario, Canada. abstr. bibl. bk.rev. charts. index. Indexed: Biol.Abstr. C.L.Med.Lit. Can.Ind. Chem. Abstr. Lab.Ind. Nutr.Abstr. Q.C.Ind.Med.

Health; Canada's national health magazine. 1933. bi-m. $1. Health League of Canada, 111 Avenue Rd., Toronto 5, Ontario, Canada. bibl. bk.rev. illus. Indexed: Can.Ind.

Health culture. 1894. m. $3. Alice L. S. Turner, Publisher, 1133 Broadway, New York 10, N. Y.

Journal of social hygiene. 1915. m. (Oct.-June) $3. American Social Hygiene Association, 1790 Broadway, New York 19, N. Y. bibl. bk.rev. illus. index. Indexed: Biol.Abstr. Int.Ind. P.A.I.S.

Milbank memorial fund quarterly. 1923. q. $1. Milbank Memorial Fund, 40 Wall St., New York 5, N. Y. illus. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. P.A.I.S. Psycho.Abstr. Q.C.Ind.Med.

Mosquito news. 1940 q. $5. American Mosquito Control Association, T. G. Raley, 1941 Front St., W., Selma, Calif. abstr. bibl. bk.rev. illus. Indexed: Biol.Abstr.

Oficina sanitaria panamericana. Boletin. (Text in Spanish, Portuguese, French and English) 1922. m. $5. 1501 New Hampshire Ave., Washington 6, D. C. abstr. bibl. illus. index. Indexed: C.L.Med.Lit. Chem.Abstr. Q.C.Ind.Med.

Pest control. 1933. m. $3. (Controlled free distribution) The Extermination Log, 512 E. 14th St. Kansas City, Mo. illus. Indexed: Biblio.Ind. Biol.Abstr.

Practical home economics. 1929. m. (Sept.-June) $3. Scholastic Corp., 33 West 42nd St., New York 36, N. Y. bibl. bk.rev. illus. Indexed: Educ.Ind. P.A.I.S. R.G.

Prevention; devoted to the preservation of human health. 1948. m. $4. Rodale Press, 7th and Minor Sts., Emmaus, Pa.

Public health reports. (U. S. Public Health Service) 1878. m. $4.25. Superintendent of Documents, Government Printing Office, Washington 25, D. C. bibl. illus. stat. index. Indexed: Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Ind.Arts. Nutr.Abstr. PA.I.S. Psycho. Abstr. Q.C.Ind.Med.

Sanitary maintenance. 1943. m. Controlled free distribution. Trade Press Publishing Co., 407 E. Michigan Ave., Milwaukee, Wis.

Today's health. 1923. m. $3. American Medical Association, 535 N. Dearborn St., Chicago 10, Ill. bk.rev. illus. index. Indexed: Chem.Abstr. P.A.I.S. Psycho. Abstr. R.G.

Wastes engineering; sewage and industrial. 1930. m. $2. Case-Sheppard-Mann Publishing Co., 24 W. 40th St., New York 18, N. Y. illus. index.

MOUNTAINEERING

Ad-i-ron-dac. 1937. bi-m. $1. Adirondack Mountain Club, 54 Lenox St., Albany 3, N. Y. bk.rev. illus.

American alpine journal. 1929. American Alpine Club, 140 E. 46th St., New York, N. Y.

Appalachia. 1876. m. $2.50. Appalachian Mountain Club, 5 Joy St., Boston 8, Mass. bk.rev. illus. cum. index: v. 1-10 (1876-1904)

Appalachian trailway news. 1940. q. $1.50. Appalachian Trail Conference, 1916 Sunderland Place, N.W., Washington 6, D. C.

M C M bulletin. 1934. q.? Membership. Mountain Club of Maryland, Inc., 106 W. Madison St., Baltimore 1, Md. (Processed)

Mountaineer. 1907. m. (Jan.-Nov.); s-m. (Dec.) $2. Mountaineers, Inc., Box 122, Seattle, Wash.

Potomac Appalachian trail club. Bulletin. 1932. q. $1. 1916 Sunderland Place, N.W., Washington 6, D.C. bibl. bk.rev. illus.

Sierra club bulletin. 1893. m. (Sept.-June) $3. 2061 Center St., Berkeley 4, Calif. illus. cum.index: v. 13-16 (1928-1931).

Skyline trail. (Skyline trail hikers of the Canadian Rockies) (1933). irreg. Membership. Skyline Trail Hikers, Room 294, Windsor Station, Montreal, Quebec, Canada, illus.

Trail and timberline. 1918. m. $2.50. Colorado Mountain Club, 1400 Josephine St., Denver 6, Colo.

Trail riders. no. 90, 1950. irreg. Membership. Trail Riders of the Canadian Rockies, Windsor Station, Montreal, Quebec, Canada.

Trails. 1920. m. Price not given. California Alpine Club, Pacific Bldg., San Francisco, Calif.

PHYSICAL CULTURE

Bernarr Macfadden's journal. 1899. m. $1. Bernarr Macfadden Foundation, Inc., 220 E. 42nd St., New York 17, N. Y.

Iron man. 1937. bi-m. $2. Perry Rader, 512 Black Hills Ave., Alliance, Nebr.

Muscle builder. 1950. m. $3. Joseph Weider, 16 Hopkins Ave., Jersey City, N. J.

Muscle power. 1936. $3. Muscle Power Publishing Co., 4466 Colonial Ave., Montreal, Quebec, Canada.

Strength and health. 1932. m. $3. Strength and Health Publishing Co., 51 N. Broad St., York, Pa.

Tomorrow's man. 1952. m. $2.50. Irvin Johnson, Publisher, 22 E. Van Buren St., Chicago 5, Ill.

PHYSICAL EDUCATION

Athletic journal. 1921. m. (Sept.-June) $2. Athletic Journal Publishing Co., 1719 Howard St., Evanston, Ill. bk.rev. illus. index. Indexed: Educ.Ind. Q.C. Ind.Med.

Coach and athlete. 1938. m. (Sept.-June) Dwight Keith, Publisher, 310 Buckhead Ave., Atlanta 5, Ga.

Journal of health—physical education—recreation. 1896. m. (Sept.-June) Membership. $5. American Association for Health, Physical Education and Recreation, 1201 16th St., N.W., Washington 6, D. C. bibl. bk.rev. illus. index. Indexed: Educ.Ind. Q.C.Ind. Med.

Journal of physical education. 1901? bi-m. $1.50. Physical Education Society of North America; Young Men's Christian Association, 212 Xenia Ave., Yellow Springs, Ohio. bk.rev. illus. Indexed: Educ. Ind.

Mentor. 1950. m. $2.50. Pete Collett, Publisher, 2224 Weatherbee St., Fort Worth, Texas.

Physical educator; a magazine for the profession. (Phi Epsilon Kappa fraternity) 1940. 4 times a year. Membership (non-members $2.00) 3747 N. Linwood Ave., Indianapolis 18, Ind. bk.rev. illus. index.

Research quarterly. 1930. q. $5. American Association for Health, Physical Education and Recreation, 1201 16th St., N.W., Washington 6, D. C. abstr. bk.rev. charts. illus. index. cum.index: 1930-1939; 1940-1949. Indexed: Biblio.Ind. Educ.Ind. Psycho.Abstr.

Scholastic coach. 1931. m. (Sept.-June) $2. G. H. McCracken, Publisher, 33 West 42nd St., New York 26, N. Y. illus. index. Indexed: Educ.Ind.

PHYSICAL THERAPY

Physical therapy review. 1921. m. $6. American Physical Therapy Association, 1790 Broadway, New York 19, N. Y. abstr. bibl. bk.rev. illus. Indexed: C.L.Med. Lit. Q.C.Ind.Med.

PHYSIOLOGY

American journal of physiology. 1898. m. $7.50 per vol. (4 vols. per year) American Physiological Society, 2101 Constitution Ave., Washington 25, D. C. bibl. illus. cum.index: v. 1-120 (1898-1937) (in 4 vols.) Indexed: Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Journal of applied physiology. 1948. m. $7.50. American Physiological Society, 2101 Constitution Ave., Washington 25, D. C. Indexed: Biol. Abstr. C.L. Med.Lit. Nutr.Abstr.

Journal of general physiology. 1918. bi-m. $7.50. Rockefeller Institute for Medical Research, 66th St. and York Ave., New York 21, N. Y. bibl. illus. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Psycho.Abstr. Q.C.Ind.Med.

Physiological reviews. 1921. q. $7.50. American Physiological Society, 2101 Constitution Ave., Washington 25, D. C. Indexed: C.L.Med.Lit. Chem.Abstr. Psycho.Abstr. Q.C.Ind.Med.

PLAYS AND PAGEANTS

Plays; the drama magazine for young people. 1941. m. (Oct.-May) $4. Plays, Inc., 8 Arlington St., Boston 16, Mass. Index. Indexed: R.G.

Plays and players. 1951. m. $5. Schubert Publications, Inc., 220 S. Michigan Ave., Chicago, Ill. bk.rev. illus.

Playshop. 1939. q. $1. Division of Dramatics, Pennsylvania State College, State College, Pa. (Processed)

Puppetry journal. 1949. 6 times a year. $3.50. Puppeteers of America, Ashville, Ohio. illus.

Recreation. 1907. m. (Sept.-June) $4. National Recreation Association, 315 Fourth Ave., New York 10, N. Y. bibl. bk.rev. illus. index. Indexed: P.A.I.S. R.G.

SCOUTING

American girl. 1917. m. $3. Girl Scouts of the U.S.A., 155 E. 44th St., New York 17, N. Y. bk.rev. film rev. illus. index.

Boy scout handbook. 1910. 2 to 4 times a year. 50c per no. Boy Scouts of America, 2 Park Ave., New York 16, N. Y.

Boys life for all boys. 1912. m. $3. Boy Scouts of America, 2 Park Ave., New York 16, N. Y. illus.

Scouting magazine. 1913. 10 times a year. $1. Boy Scouts of America, 2 Park Ave., New York 16, N. Y. bk.rev. illus. index.

TRAP SHOOTING

American rifleman. 1855. m. $4. National Rifle Association of America, Inc., 1600 Rhode Island Ave., N.W., Washington 6, D. C. bk.rev. illus. index.

Gun and cartridge record. 1952. m. $2. The Falls Publishing Co., 71 N. Main St., Chagrin Falls, Ohio. bk.rev. illus.

Muzzle blasts. 1933. m. $3. 1412 Third St., Portsmouth, Ohio. illus.

Sportsman's review; digest of trapshooting. 1889. s-m. $4. Sportsman's Review Publishing Co., Inc., 22 E. 12th St., Cincinnati 10, Ohio. illus.

WOMEN'S SPORTS AND ATHLETICS

Official aquatics, synchronized swimming, winter sports and outing guide. 1941/42? 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official archery—riding guide. 1944/46. 75c. American Recreation. National Section for Girls' and Women's Association for Health, Physical Education and Sports, 1201 16th St., N.W. Washington 6, D. C.

Official basketball and official rating guide for women and girls, containing revised rules. 1905/06? 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official bowling—fencing—golf guide. 1954/56. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official field hockey—lacrosse guide, with official rules. 1939. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official recreational games and volley ball guide. 1951/53. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official soccer—speedball guide, including field ball for girls and women, with official rules. 1948/50. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official softball, track and field guide, with official rules. 1938. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Official tennis—badminton guide. 1946/48. 75c. American Association for Health, Physical Education and Recreation. National Section for Girls' and Women's Sports, 1201 16th St., N.W., Washington 6, D. C.

Woman bowler. 1936. m. (Sept.-April); bi-m. (May-Aug.) Woman's International Bowling Congress, 4634 N. Francisco St., Chicago 25, Ill. illus.

MISCELLANEOUS

Genetics and Heredity

American journal of human genetics; a record of research, review and bibliographic material relating to heredity in man and to the applications of genetic principles in medicine. 1949. q. $8. American Society of Human Genetics, Mount Royal and Guilford Ave., Baltimore 2, Md. bibl. charts. illus. Indexed: C.L.Med.Lit. Q.C.Ind.Med.

Physical Anthropology

American journal of physical anthropology. 1918. q. $7.50. Wistar Institute of Anatomy and Biology, Woodland Ave. and 36th St., Philadelphia 4, Pa. bibl. bk.rev. charts. illus. index. cum.index: vol. 1-22 (1918-1937) Indexed: Biol.Abstr. C.L.Med.Lit. Int.Ind. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Psychology

American journal of psychology. 1887. q. $7. American Journal of Psychology, Mezic Hall, University of Texas, Austin, Texas. bk.rev. charts. index. cum. index: v. 1-30 (1887-1919); v. 31-50 (1920-1937) Indexed: Biog.Ind. Biol.Abstr. C.L.Med.Lit. Int.Ind. Psycho.Abstr. Q.C.Ind.Med.

General Medicine

American medical association. A.M.A. journal. 1848. w. $15. 535 N. Dearborn St., Chicago 10, Ill. abstr. bk. rev. charts. illus. index. Indexed: Abstr.Bull. Biol. Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Physical Medicine

Archives of physical medicine and rehabilitation. 1920. m. $7. American Congress of Physical Medicine, 30 N. Michigan Ave., Chicago 2, Ill. abstr. bk.rev. illus. Indexed: Biol. Abstr. C.L.Med.Lit. Chem.Abstr. Q.C.Ind.Med.

Biology, Statistics

Biometrics. (Biometric Society) 1945. q. $7. Box 5475, Raleigh, N.C. abstr. index. Indexed: Biblio.Ind. Biol.Abstr. Chem.Abstr. Psycho.Abstr.

Child Study

Child study; a quarterly journal of parent education. 1923. q. $2.50. Child Study Association, 132 E. 74th St., New York 21, N.Y. bibl. bk.rev. index. Indexed: Biblio.Ind. Educ.Ind. Psycho.Abstr.

Endocrinology

Endocrinology. 1917. m. $13. Charles C. Thomas, 321 E. Lawrence Ave., Springfield, Ill. bibl. bk.rev. charts. illus. index. Indexed: Biol.Abstr. C.L.Med. Lit. Chem. Abstr. Nutr.Abstr. Psyco.Abstr. Q.C. Ind.Med.

Biology

Growth; a journal for studies of development and increase. (Society for the study of development and growth) (issues supplement) 1937. q. $6. Kankenau Hospital Research Institute, Fox Chase, Philadelphia 11, Pa. bibl. illus. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. Psycho. Abstr. Q.C.Ind.Med.

Human Biology

Human biology; record of research, 1929. q. $5. Wayne University Press, 4841 Case Ave., Detroit 1, Mich. bibl. charts. index. Indexed: Biol.Abstr. C.L.Med. Lit. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Applied Psychology

Journal of applied psychology. 1917. bi-m. $7. American Psychological Association, Inc., 1333 16th, N.W., Washington 6, D. C. bibl. bk.rev. index. Indexed: Biblio.Ind. Educ.Ind. Int.Ind. Psycho.Abstr.

Bacteriology

Journal of bacteriology. 1916. m. $7 per vol. Williams and Wilkins Co., Mount Royal and Guilford Aves., Baltimore 2, Md. abstr. bibl. illus. cum.index: v. 1-30 (1916-1935) Indexed: Agri. Ind. Biblio.Ind. Biol.Abstr. C.L.Med.Lit. Chem. Abstr. Nutr.Abstr. Q.C.Ind.Med.

Applied Psychology

Journal of consulting psychology. 1937. bi-m. $7. American Psychological Association, Inc., 1333 16th St., N.W., Washington 6, D.C. bibl. bk.rev. charts. index. Indexed: C.L.Med.Lit. Educ.Ind. Psycho. Abstr.

Psychology

Journal of general psychology; experimental, theoretical, clinical and historical psychology. 1927. q. $14. (2 vols. per year) The Journal Press, 2 Commercial St., Provincetown, Mass. bibl. bk.rev. charts. index. Indexed: Biblio. Ind. Biol.Abstr. Int.Ind. Psycho. Abstr. Q.C.Ind.Med.

Old Age

Journal of gerontology. 1946. q. $8. Gerontological Society, Inc., 660 S. Kingshighway Blvd., St. Louis 10, Mo. bibl. bk.rev. charts. illus. index. Indexed: Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. Psycho.Abstr. Q.C.Ind.Med.

Laboratory Technique

Journal of laboratory and clinical medicine. 1915 m. $12. C. V. Mosby Co., 3207 Washington Blvd., St. Louis 3, Mo. abstr. bibl. charts. illus. index. Indexed: Abstr.Bull. Biol.Abstr. C.L.Med.Lit. Chem.Abstr. Nutr.Abstr. Photo.Abstr. Psycho.Abstr. Q.C.Ind. Med.

Safety Education

National safety news. 1919. m. Membership (nonmembers $7.50) National Safety Council, Inc., 425 N. Michigan Ave., Chicago 11, Ill. bibl. bk.rev. illus. index. Indexed: Biog. Ind. Eng.Ind. Ind.Arts. P.A. I.S. Q.C.Ind.Med.

Psychology

Psychological review. 1894. bi-m. $6.50. American Psychological Association, Inc., 1333 16th St., N.W., Washington 6, D.C. charts. index. Indexed: Biol. Abstr. C.L.Med.Lit. Int.Ind. Psycho.Abstr. Q.C. Ind.Med.

Safety Education

Public safety. 1927. m. $4. National Safety Council, Inc., 425 N. Michigan Ave., Chicago 11, Ill. bibl. illus. stat. Indexed: P.A.I.S. Psycho.Abstr.

Alcoholism

Quarterly journal of studies on alcohol. 1940. q. $5. Journal of Studies on Alcohol, Inc., 52 Hillhouse Ave., New Haven, Conn. abstr. bibl. bk.rev. illus. tr.lit. index. Indexed: Biblio.Ind. Biol.Abstr. C.L. Med.Lit. Chem. Abstr. P.A.I.S. Psycho.Abstr. Q.C. Ind.Med.

Safety Education

Safety education. 1924. m. (Sept.-May) $3.30. School and College Division, National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill. bibl. bk.rev. illus. index. Indexed: Educ.Ind. P.A.I.S.

Editor's Note: Libraries and individuals wishing to purchase the complete classified list may order from Dr. R. R. Schreiber, 3747 N. Linwood Avenue, Indianapolis 18, Indiana. The price is fifty cents.

Principles of Buying and Caring for Football Equipment

Norman D. Duncan

FOR THE COACH to become an expert in all fabrics and construction used in athletic equipment before entering the field is out of the question. He can establish basic criteria or principles upon which to operate and by applying sound judgment develop into a highly qualified buyer. The new coach should be guided by the following:

A. Purchase from well-established firms.
   1. Protection for the players is primary consideration.
   2. Have confidence in salesmen.
   3. Ask questions on types of construction, color dyes, leather tanning, stitching and testing procedures.
   4. Use good quality merchandise.
B. Standardize equipment.
   1. Don't change color combination and styles of pants and jerseys from year to year.
   2. Establish a sound replacement program.
   3. Purchase merchandise that has proven itself in your locality and climate.
C. Buy within your budget.
   1. Don't fall for a package arrangement in order to gain in quantity.
   2. Buy consistently and regularly.
   3. Avoid overpurchasing and buying too expensive material.
D. Purchase early.
   1. Order in the spring for fall.
   2. Allow 60 to 90 days for delivery.
   3. Return goods not meeting specification.
E. Take advantage of legitimate discounts.
   1. "Two percent within ten days" is legitimate discount.
   2. Cash customers satisfy manufacturers.
   3. Institutions with good credit rating deserve special consideration when needed.

The Scope and Details of Buying

The list of items the coach might need to purchase includes: headgears, shoulder pads, hip pads, knee pads, rib or blocking pads, special injury pads, balls, pants, jerseys, hose, sideline jackets, "T" shirts, and shoes.

Sporting goods companies report that a new coach will buy only such equipment as he used as a player up to five years before he gains the confidence to change and use other types or lines. This might be an acceptable procedure for some

but not for all. Many students destined to be football coaches have never played the game or only in high school and must have more detail in what to look for in equipment. To assist these men, and to some extent those who have recently played the game in college, a review of equipment characteristics and details are presented. These simple guides should be used in practical equipment purchasing exercises in the classroom. Of primary importance are the four items of protection—helmet, shoulder pads, hip pads and shoes.

Helmet

This most important protective item should:

1. Be made of a one-piece molded material, such as plaster, fiber or rubber plastic.
2. Fit the head snugly. Excess movement of helmet causes injuries. Eighty percent of heads are approximately the same shape. Deviations in head shape require extra padding for adjustments.
3. Protect vital areas. Helmet must cover base of skull, temple region, and be able to absorb shock. Ask questions of salesman as to shock-absorbing qualities. His answers will indicate true worth of the article. Listen and learn from his discussion of your questions.

Shoulder Pads

Can be purchased in either flat or cantilever type. Manufacturing experts argue that either type will afford equal protection. Shoulder pads should:

1. Fit properly. When pad is placed on shoulders it should fit snugly over shoulders, back of neck, and down the front like a vest of a well-tailored suit of clothes. Further check fit by pulling body straps to desired tightness. If straps cut up under arms they will chafe wearer. Body straps should, when pulled tight, feel snug over upper ribs.
2. Protect vital areas. All boys do not have the same upper body and shoulder construction. Some have longer or shorter necks, so pads must be purchased in sizes which properly protect the acromion process (shoulder points) and sterno-clavicular articulation (where clavicle joins the sternum). If pad is too large or small, the pad and fiber will not stay in position to cover these vital areas with comfort. Most firms will carry different sizes in any one particular price range of shoulder pads. The cup is hinged to the fiber or pad proper beyond the acromion process and serves as a shock absorber to the middle deltoid muscle and allows freedom of arm action. The epaulet merely protects the opening between the pad and the cup. The protection to the vital parts of the shoulder then comes from the main body of the pad and not the cup or epaulet. The pad proper should be used in sizing or fitting and not the cup.
3. Be padded. There is no appreciable difference between foam rubber and kapok padding as a protective agent. Foam rubber is more expensive and kapok is easier to recondition. The secret to maintaining protection from these materials is in the care of the pad after each use. (See care of equipment.)

Hip or Kidney Pads

Probably the most difficult piece of protective equipment to purchase in that comfort, control of entire body action, and protection are involved. Hip pads should:

1. Fit properly. Pads must be cut so as to afford protection and freedom of body to bend and crouch. These should be purchased in sizes according to pant (shell type) sizes and range from medium to heavy in weight.
2. Protect the following areas:
   a. Down to and below the end of the coccyx (tailbone).
   b. Trochanter or head of femur. (Thigh bone.)
   c. Anterior-superior spine of ilium (front edge and top of pelvis).
3. Be padded with either foam rubber or kapok. Either type is acceptable and, like shoulder pads, require care if expected to give long service.

Shoes

Ranked second in importance in the list of four protective items. Blisters, weak arches and ankles restrict many players of a full and successful football experience. Some high school athletes purchase their own shoes and the best pair made will not provide comfort or protection unless the players know how to purchase them and be fitted. It is the responsibility of the coach to inform his players in the techniques of buying shoes so that they:

1. Fit properly. Shoe should fit snug and tight without extra movement of foot inside shoe. Normally, the wearer should allow from one-half to a full size smaller than, but the same width as his street shoes.
2. Protect arches. Attempt to purchase a shoe that will tend to give the same body posture as in street shoes. For many years football shoes have been made with antiquated lasts in that the foot, when the body weight was equally distributed on it, rested on a low heel and back of ball of foot. Modern lasts have raised heel and allow the wearer to place most of the weight onto the ball of the foot. This alone relieves a great strain on the achilles tendon and gives better protection to the arch. Tendency in the past was to wear split shank, two-piece sole shoes. These soles allow greater flexibiilty, but do not protect the arch in that they bend in the wrong place. The only place the foot bends is just behind the toes and to get a truly flexible shoe, the sole should be split where the foot bends. As this is next to impossible, a straight shank or full-sole shoe, like street shoes, is desirable and gives more protection.

Jerseys

One must be philosophical in purchasing jerseys for his team. Their primary purpose is to place the school colors on parade and afford the spectators an easy means of distinguishing one team from the other. All jerseys will get wet and dirty through play and must be cleaned or washed after each game. Tears will deveop and repairs must be made. Jerseys and numerals can be a costly budgetary item, or a conservative buyer can spend more on protective equipment and purchase less expensive materials used mostly for dress or show.

Experienced buyers claim that if jerseys are properly handled, there is no distinct advantage of one material over another, except maybe for warmth. As one honest manufacturer stated, "Spectators in the stands cannot tell what material is used in the jerseys." Wool, rayon, durane, and cotton are the more common materials used in jerseys. Numerals also come in a variety of cloths. The

choice of game jerseys then rests with the whim of the coach, his budget and needs for protective equipment.

In purchasing jerseys select one that (1) is fully cut, (2) is long enough to stay down in the pants, and (3) does not bind player action. The best procedure here is to use a player as a model. Take a boy of a known chest size, say 40, have him put on a pair of shoulder pads, then slip on the jersey in question. If the sample 40-inch jersey allows him ample freedom and is long enough, then give it real consideration regardless of material. The style of sleeves will also affect the cost of the jerseys. Here, again, good judgement must be used. A raglan sleeve poorly cut will not offer the comfort or wearing qualities of a well-cut plain-sleeved shirt. Even the elastic shoulder insert will not guarantee a serviceable jersey—cut is the important factor.

Pants

"One-piece pants are complete, with all necessary padding. Shell pants, as the name implies, are empty of the protective padding, although pockets are provided for the insertion of padding at each area where additional protection is needed. The padding is purchased separately and then inserted into these spaces. Most shell pants are supplied with loose-hanging knee pads. Some coaches advise the purchase of shell pants rather than the one-piece style because pads can be purchased separately and when worn out can be discarded without the need for high replacement cost. However, the one-piece type of pants is easier to care for and may, for this reason, be preferable."[1]

Here is another item, although not truly a protective piece of equipment it is a necessity and must be discussed. Pants are made of cloth and must be expected to have limited wearing qualities. Like jerseys, they get wet and dirty and must lose much of their durability in the weekly trip to the washing machine.

Most players will come into forceful contact with the ground or turf and rips and tears must be anticipated. Knees will split regardless of how well pants are constructed. Pants can be colorful or plain, but the wise buyer will select a pant that blends well with the jersey and have the following features:

1. Fit or cut. If shell pants are being considered, use a player as a model and try a pair of 32 pants on a boy, wearing hip pads, known to wear a size 32. Check to see that pant, while containing knee pads, extends over knee in deep bend position. Also from the crouch position, check for adequate seat so back is not pulled down from tail bone and that thigh guards are held tightly to leg.
2. Allow for abnormal body builds. Football pants are generally made to fit the normal body build or regular leg length and rise. If some short-waisted and long-legged boys are on the squad, order sufficient pants two or three inches *long*. Likewise, to fit the short-legged and long-waisted boy, order pants one or two inches *short*. Coaches who fail to make this allowance invariably blame the salesman for selling poorly cut pants. Remember, the salesman does not know your personnel and to field a neat appearing team is the coach's responsibility.
3. Thigh guards and knee pads. Extra thigh guards and knee pads should be stocked regardless if shell or one-piece pants are used. These items do wear out and lose their resiliency, so must be replaced. They are not particularly expensive and are normally interchangeable in most makes of pants. If old pants are to be salvaged, be sure to remove these protective items before discarding.

Care of Equipment

Once the football equipment has been received by the school and the checks drawn for its payment, the coach has a moral obligation to see that all items receive the best possible care and maintenance. In attacking the care of equipment problem, the coach will be wise to consider it as having two significant parts, personal care and school care.

Personal Care

The life of most items of equipment depends upon proper fit and handling by the person using the equipment. The coach is the expert on how equipment should fit and he must either personally supervise the fitting of each boy or establish a system to insure every player is fitted properly and knows how to care for his equipment. If the squad is small and time permits, the coach should try on and fit each piece of equipment to every squad member. If the squad is large, then a guide program, using lettermen as monitors, will prove useful and effective.

Regardless of the squad size, the coach should first take the time during a pre-season meeting or the initial squad meeting of the season to illustrate how to fit and wear football equipment. Take a model and starting with a naked body (supporter should be worn) demonstrate how to place shoulder pads, hip pads, jersey, pants, stocking, socks and shoes on the player. Emphasize how each item is sized, what parts of the body it should protect, and what constitutes a proper-fitting garment. This procedure will eliminate embarrassment for the new players who have never worn a uniform before as well as being a review for the older boys. Invite the players to check with you personally after being issued their equipment if they feel some item is poorly fitted; also inform the squad of your monitor system.

Use of Monitors

In order to instill good care of equipment procedures, and to meet an educational objective of football, assign monitors, selected from lettermen, to act as your equipment supervisors. As an example, select a monitor to oversee six to eight other players. Instruct these monitors in methods of hanging equipment in lockers, or on hangers if a

[1] Bourquardez, Virginia and Heilman, Charles. *Sports Equipment*. New York, N. Y., A. S. Barnes and Co., P. 131.

drying room is available, and give them the authority to enforce established procedures. Be emphatic that equipment is costly, and for the school to realize its full worth, it should never be thrown on the gymnasium floor or piled into lockers. Wet uniforms will dry in odd shapes if not properly hung and that the next time it is used, might cause unnecessary bruises, chafing, or blisters. Monitors could well be rotated and praised for good leadership of their groups. Poor monitors should be counseled as to their leadership qualities.

School Care

Any school supporting a football team should consider a good equipment room as the first essential in the proper care of equipment. "A carelessly kept supply room can take a greater toll on the life of athletic equipment than many hours of hard service on the playing fields because athletic equipment spends most of its life in the equipment room."[2]

The equipment room should be planned to provide for rodent-proof lockers or cabinets equipped with moisture-proof devices, a work or repair bench, and should be operated by personnel properly instructed in storage and maintenance procedures. Every item of equipment that has been in use and turned in to the supply room should be immediately *dried, cleaned,* and *repaired,* then placed in appropriate storage areas. While in storage, all equipment and bins should be periodically dusted and additional naphthalene or moth repellent applied.

Headgear

Should not be hung by chin straps, ear piece, or piled into boxes one on top of the other, as these methods tend to pull the headgear out of shape or cause crowns to be bent or broken. Accepted but not recommended is storage by threading long, thin poles or rods through the ear openings. Suspension in this manner will protect the headgear while in storage, but care must be taken when removing from the poles. Several headgear hung together are awkward to handle and must be removed one at a time in order to prevent damage due to accidents, such as slipping off and striking the floor. Headgear should be stored in small bins with openings large enough to accommodate each one separately, so they may be dusted periodically, handled without fear of bumping or knocking against other hard materials, and protected in general. They should be placed in the bins with the crown up so the weight of the headgear rests on the bottom of the ear pieces and the back of the headgear proper.

Shoulder Pads

Should be stored after fiber, leather, and hinges have been cleaned and dried with all body straps removed from keepers. Pads should be spread out flat resting on fiber parts with padding up and stacked no more than five high. Stacking pads higher will overweigh pads near bottom and cause them to be pressed out of shape. Never hang pads by the body straps. If they must be hung, make sure they are suspended from the body of the pad itself. Because pads are bulky and take considerable space to store, hanging racks are sometimes placed near the ceiling of the storeroom. Although this might seem a wise use of space, this area should not be utilized for storage if at all possible. Fiber's prime enemy is heat and to use the top area of a room where the temperature is known to be the greatest is not recommended.

Hip Pads

Should never be hung but stored in a flat position resting on the fiber parts with padding up. Hip pads can be safely stacked six or seven high in this manner without damage.

Shoes

Should not be stored until renovated and protected by a moderate application of dressing (saddle soap, Black Magic, etc.). Dressing will prevent leather from drying or cracking and restore life to stitching and leather. Open shelves divided by shoe sizes are normally used. However, if the original cardboard boxes can be retained for storage purposes, each pair will have additional protection as well as being more readily identified as to size and make.

Pants

Should be thoroughly clean and renovated, then stored according to size with thigh and knee pads removed. Unless pants have colored or special inserts, they can be stored in open bins and stacked as high as desired. Pants with inserts are best stored by placing several pair in a sealed cardboard box liberally sprinkled with moth repellent, then placed in bins. Some types of pants tend to shrink in cleaning, so care must be taken in sizing for storage. Here, the storekeeper will be wise to measure pants before storing and adjust stack records accordingly.

Jerseys and Stockings

Should be cleaned and stored by size. Jerseys and stockings of any type should never be stacked in open bins where dust will collect and attract moths. The use of sealed cardboard boxes and ample moth repellent placed in dry bins will afford best protection.

Thigh Guards and Knee Pads

Should be cleaned with soap and water, then thoroughly dried before storing. These items can

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[2] Voltmer, E. F. and Esslinger, A. A., *The Organization and Administration of Physical Education.* New York, Appleton-Century-Crafts, Inc., Second Edition, 1944, p. 341.

be destroyed by moths, so should be stored in sealed boxes protected by repellent.

Other Equipment

Footballs normally give the shortest service of any equipment item connected with football, and are far from being the most inexpensive. Expert and exacting care of balls during the season and while in storage is absolutely necessary if the normal life span is expected. Leather footballs can be declared useless in one day's practice or game if allowed to get soaking wet and dried without care. If practice must be conducted in muddy and wet conditions, the balls should be deflated by a pound or two pressure, then thoroughly saddle-soaped immediately following practice. Before allowing to dry in normal room temperature, the pressure should be increased to just below specification. Several saddle soap or light vegetable oil applications should be given before ball is reissued.

Rubber footballs, since their refinement in 1949 to proper weight, feel, and playing characteristics, are being used more and more in practice sessions and games. The wise purchasing agent will always include a supply of rubber footballs, as their cost is not as great as the leather ball and the wearing qualities are much greater. The rubber ball is especially fitted for wet practices or damp and dew-covered game surfaces. Rubber will not pick up moisture, thereby adding weight to the ball. As the rubber ball will not absorb moisture, the ball covering need only be wiped clean with a wet rag or sponge after use and allowed to dry.

When inflating a ball with a rubber core valve, the inflating needle should be moistened with glycerin. Care should be taken to insert the needle with a twisting or rotary motion up to the shoulder of the needle. To remove needle, do not pull it straight out. It should be rotated out in one smooth action. An accurate pressure gauge and source of air is important to the proper care of footballs. A hand pump designed for athletic ball inflation or another source of low-pressure supply should be used. All balls carry a recommended pressure for best performance and an accurate gauge with an easily controlled source of air pressure will insure proper inflation without danger.

Concluding Statement

In an case, buy the best possibe equipment from the most reliable firms, and get the most value for your money. "Seconds," or "bargains" seldom result in a saving of money. Teach your players to use all protective equipment properly, and to take good care of it. The end result will be fewer injuries, greater satisfaction all-round, and less expensive in the long run.

Rainy Day Physical Education

Robert J. Nareau

ONE RAINY MORNING recently, I happened to be in the office of a friend who is the principal of an elementary school in California. The school consists of some twenty-odd classrooms and a multi-purpose room. A multi-purpose room is a large, barn-like structure prevalent among the elementary schools of California and designed to serve as cafeteria, auditorium and gymnasium.

During the course of our discussion, the school secretary politely interrupted our conversation to inquire whether or not, due to the rainy conditions, she should inform the teachers that physical education classes would be held in the individual classrooms. Upon receiving an affirmative reply from the principal she left to convey his wishes. Being a staunch supporter of the physical education program, and possessing an insatiable curiousity as to how the activities would be handled in the classroom, I asked if I might observe the events that were about to take place.

Upon receiving the principal's permission, I started on my tour of observations of the various classrooms. Recognizing that the physical education program in the primary grades is largely a play situation, yet feeling strongly that in the upper grades in the elementary school the situation should be one that is educational as well as physical, I confined my visit entirely to upper grade classrooms. In the seven situations which I witnessed, each of which was supposed to be a class of instruction in physical education, I observed the following situations:

1. Students were playing a game called "eraser tag" in which one student balancing an eraser on top of his head tries to tag a fellow student who is also balancing an eraser on top of his head as the two walk rapidly up and down the aisles of the classroom.
2. Students were doing calisthenics as they stood beside their desks under the direction of the classroom teacher.
3. Students were milling around the room in a loud and boisterous fashion with no obvious educational objective on the part of the teacher except possibly a little social education and a release of tension.
4. Classes in the remainder of the four classrooms were engaged in regular academic pursuits.

As far as the physical education curricuum is concerned, it was obvious that there was little that was physical, and even less that was educational, going on. Inclement weather certainly poses a problem in many instances to the successful functioning of a

good physical education program, particularly in those situations where gymnasium facilities are not available. However, with proper administration and good planning the physical education program should suffer no more because of unfavorable weather conditions than any other phase of the school program.

What then can be done, both from an administrative and a teaching standpoint to insure that the educational process continues to be a part of the daily physical education program irregardless of outside interference?

First of all, *the wise administrator in scheduling physical education classes, will not schedule all or several grades for the same hour.* In this way, when only one classroom or a small group of students is scheduled for physical education at a particular time it is possible to put facilities of the multi-purpose room or gymnasium to maximum constructive use. This isn't the situation, however, when several or all the groups are scheduled for the same hour, in that, due to the larger number of students participating, facilities would be overtaxed and we could hope for little more than organized chaos.

2. *Administrators should work toward more adequate preparation of teachers for the teaching of physical education.* This may be obtained in one of several ways:

a. The hiring of one or more full-time staff members, who are regularly qualified physical educators, to handle the entire physical education program. This, however, is not always possible from a financial standpoint.
b. As a second alternative it is suggested that school administrators utilize to the fullest the strong points and talents of their full-time staff members. By this I mean that on nearly every elementary school staff one or more members of the group have some ability in the field of physical education. By proper scheduling of classes and by an interchange of teachers, it should be possible for this person to teach physical education for all groups.
c. The third alternative is by an intensive in-service training program utilizing the resources of county, state, or college consultants from the field of physical education. Workshops could be held to better acquaint and qualify the regular classroom teacher with the task of at least more adequately instructing in the field of physical education.

Now from the standpoint of the classroom teacher just what can be done when the situation is such that the teacher is forced or required to hold a physical education class within the confines of his classroom? What are some ways we can continue to maintain an educational approach?

1. Use films, filmstrips, slides or other audio-visual material pertaining to the physical education activity that is currently being taught. Common sources for such films are city and county education audio-visual departments, State Department of Education, local school or college film libraries, civic and fraternal organizations, business houses and sporting goods concerns, service organizations such as the American Red Cross, military establishments, private citizens and commercial film companies.
2. Guest speakers or authorities in the world of sports and physical education. There are undoubtedly in every community experts, many of whom are parents of students enrolled in the school, who would be thrilled by the opportunity to talk to a class or demonstrate the sport of their choice and ability. Don't limit this to a few sports but add others such as badminton, skiing, hunting and fishing.
3. Discussions led either by the teacher or students on the rules and strategy of various sports activity.
4. Oral and written reports to or by members of the class on the history of all the different sports.
5. Field trips to physical education or sporting establishments within the community.
6. The compiling of material relating to physical education or sporting activities then in season and using it for display purposes on class-room bulletin boards.

All of the above activities possess some educational value and will aid the individual student in developing an interest and awareness in the field of physical education. By utilizing these suggestions, the rainy day physical education program can become a constructive educational classroom activity instead of being used as a means of simply "killing time."

Sugar and Dental Caries

W. K. Streit

IT IS THE POLICY of the Cincinnati Public Schools that candy should not be sold in the lunchrooms of elementary schools and that prohibition of the sale of candy and soft drinks should extend to any portion of the school premises.

Full growth and good health both require that an individual obtain the nutrients needed by the cells of the body. A correct balance of carbohydrates, proteins, fats, minerals and vitamins are essential for growth, the prevention of certain diseases, and the maintenance of normal body functioning. Good nutrition, based on proper diet, is a foundation stone in the structure of health.

Caries

It is now widely believed that the decay of tooth enamel is caused by acids produced in the fermentation of sugars. For this reason, the use of sugar should be restricted. A considerable reduction in sugar consumption can be achieved by eliminating confections and sweetened beverages from the diet. Thus, children who habitually eat candy, consume soft drinks, eat rich pastries, and

otherwise crowd their diets with carbohydrates are creating a condition in their mouths that is favorable to the growth of bacteria.

Acid fermentation takes place in the mouth within a few minutes and if fermentable material is not soon removed, brushing the teeth will be of little or no value in preventing decay.

Dental caries, or tooth decay, is so widespread that nearly all children have had some experience with it. Reports from schools in various parts of the country indicate that approximately 90% of the children who have not received dental treatment within the preceding year need dental care. During the last school year 78% of the Cincinnati Public School children examined needed dental attention. Many of our school children can't afford dental treatment and if they could, there would not be nearly enough dentists to take care of them.

Authoritative Opposition

The sale of candy and soft drinks is not in harmony with the best health standards. The Council on Foods and Nutrition of the American Medical Association believes that one of the valuable functions of a school lunch program is to provide training in sound food habits. Of considerable significance in such a program is the sale of food, confections or drinks on the school premises. School children generally have a limited sum of money for the purchase of their daily lunch. If a portion of this money is spent on substances of limited nutritional worth, the value of the lunch which a child may obtain with the remaining money obviously is reduced. Thus, poor dietary habits are developed especially among younger children.

The Plan

The total school program in health education from kindergarten through senior high school provides a progression in attitudes, appreciations, and knowledge geared to the developing child's ability to understand, and results in a thorough coverage of the subject of nutrition, particularly as it applies to improved health.

In the elementary school, we aim to develop an appreciation of the fact that "sweets" cannot take the place of any one of the basic food groups, but that they may be eaten after we make sure that these essential foods are eaten. Also, we attempt to teach that it is better to drink a glass of milk or eat some fruit when a boy or girl is hungry between meals, than to eat "sweets." In this way he is more likely to contribute to his daily food requirements.

The following material is quoted from *School Lunch and Nutrition Education.* Federal Security Agency, Bulletin No. 14, Office of Education, 1951:

Question

What are suggested policies concerning sale of candy and soft drinks in schools?

Answer

The Council on Foods and Nutrition of the AMA has stated:

> "It is obvious that a school lunch suffers gross deterioration when the beverages chosen in place of milk is a solution of sugar in flavored water. It is also generally conceded that excessive sugar eaten between meals, or sugar eaten in small amounts within an hour of the regular mealtime, impairs the appetite for foods at meals."

The Council further believes:

> ". . . . It would be in the interest of the public health for all practical means to be taken to limit consumption of sugar in any form in which it fails to be combined with significant proportions of other foods of high nutritive quality."

The American Dental Association reports that sugar affects the teeth adversely by increasing the incidence of caries.

The dietary needs of the American child include approximately 25 pounds of sugar a year. In our culture of today, the average child eats approximately 150 pounds of sugar in a year.

Candy is from 75 to 85 per cent sugar. Popular candy bars are likely to weigh from one ounce to five ounces and may contain from 5 to 20 teaspoons of sugar.

With a high sugar intake, the caries rate is likely to be extremely high and the progress of decay is often rampant. If we will teach what sugar does to the teeth, we can help reduce its extremely high rate of consumption.

TEN CARDIAC COMMANDMENTS

You shall

1. Understand heart disease, and not fear it.
2. Keep the weight of your youth, and not become obese.
3. Avoid fatigue; it is a warning signal.
4. Cultivate good muscle tone and keep it by regular exercise.
5. Be moderate in use of salt, fatty foods, sex, tobacco, and alcohol.
6. Avoid drugs, vitamins, or diets except on medical advice. Treat streptococcus sore throat.
7. Learn equanimity in a world full of stress and strain.
8. Come into tune with nature so as to adapt to the inevitables of life and death.
9. Cultivate mind and soul to your utmost; they alone are indestructible.
10. Select a physician in whom you can truly confide and in whose understanding and judgment you have implicit faith.

—Dr. Irvine H. Page
President, American Heart Association.

Edited by Nelson G. Lehsten

Note: The purpose of this column is to present a summary of various procedures which are being utilized in contemporary physical education through a description of their advantages, disadvantages and special characteristics. The hope is that such treatment will increase the reservoir of concepts, devices, techniques, and procedures from which a better selection of methods might be made for the more effective conduct of the program in physical education, in health education and safety, and in recreation.

Our readers are urged to send in suggestions, ideas, and specific contributions to Nelson G. Lehsten, University High School, Ann Arbor, Michigan.

Absence, Exemption, and Readmission Procedures[1]

MAKE-UP OF ABSENCE. The procedures which are used in making up absences from physical education classes are extremely variable. There is an opinion that physical education absences cannot or should not be "made up"; however, it appears that most schools have evolved methods of meeting the problem. Make-up periods may be considered to be justifiable for excusable absences and tardiness, but not in situations where the student chooses to lose the opportunity for class participation under inexcusable circumstances. Missed classwork may be made up during study hours, before or after school, during the noon hour or during regularly scheduled make-up periods and in this way it does not interfere with other classes.

It should be pointed out, however, that use of study period for make-up prevents pupils from making up academic work. There should be a limit to the number of make-ups permitted in one week. It appears to be desirable to limit the period following an absence during which a make-up of work missed might be completed to one or two weeks, providing the student's health permits, and thus eliminating an intensive effort at the end of a semester to substitute make-ups for work done through the semester.

Generally speaking, the make-up requirements are in terms of an "hour for an hour" fulfillment of class time missed and the student may be prohibited from attending his regular class until his work is made up. This may stabilize class organization and conduct but only serves to put the student further behind. On the other hand he may be allowed to attend class but not participate until work is made up, or be reinstated to full participation upon his return while making up his work outside of class.

A questionable procedure, though suggested, would have students make up work by running laps on the track on a basis of so many laps per hour missed or against a time standard, which if not attained, nulifies the effort at make-up. This concept seems contrary to the purpose of the make-up period through the creation of a disciplinary aspect to the procedure. Further consideration of the procedures involved indicate the need to have departmental policies in physical education which conform with those of other departments in the school, and wherein violations of policy cannot be "fixed."

Tardiness. The methods of handling problems of tardiness in physical education classes should follow the pattern set within other classes in the school; if no clear-cut policy is in effect, the teacher must establish his own to insure good class organization and control. It is a fairly common practice for two or three unexcused tardinesses to be equivalent to one unexcused absence. The determination of whether or not a tardiness is excusable may be based upon excuses written by the pupils or their parents or by readmission slips from the office.

Exemptions. The procedure for excusing a student from physical education for medical reasons is usually accomplished through a request from the

[1] Lehsten, Nelson G.: "An Organization and Appraisal of Methods Utilized in the Conduct of Physical Education Activities for Boys in the Secondary School," doctorial dissertation, Indiana Universiay, 1953, pp. 172-177.

family physician, the school physician or health service or a combination of both. Excuses written by a family or school physician should state the length of time during which the exemption is in effect. Close contact with the home can materially decrease the number of requests by a parent for an exemption for his child, and in general it may be stated that requests for exemptions from physical education decrease as the program is arranged, managed and interpreted to the community.

In addition, excuses are also requested by students and/or their parents on a basis of substituting outside part-time work or on-the-job vocational training for the physical activity program since it may be of a vigorous nature. The substitution of military training is occasionally requested as a basis for exemption from physical education.

The exemption of students from physical education who participate on interscholastic athletic teams is an accepted procedure in many schools. The length of such exemption may be for the entire semester or for the duration of the season. The disadvantages of this practice involves the development of an athletic aristocracy who set themselves apart from the rest of the students. The procedure permits a limited development of the athlete in skills, knowledges, and attitudes related to the athletic sports and may have a disrupting effect on class organization to have athletes dropping in and out of class as the various seasons begin and end. From the other point of view, such an exemption frees the student for additional time to concentrate on his studies to offset the heavy demands on his time for athletic practice. He can participate at his individual level of achievement and ability and is not exposed to a duplicity of activities in athletics and physical education.

In a few instances students may be excused from physical education classes to serve as student officials or class leaders except as their responsibilities require participation in the class. Still others may be excused by the school administration for special duties and responsibilities within the school such as hall monitors, lunchroom attendants and office assistants; however, it is not desirable to employ procedures which deprive students who are physically able from participating in the physical education program.

In cases where physical disability warrants a partial exemption, a modified or adapted program should be developed. If the program is organized with the "restricted" individuals in the regular class, it can foster proper attitudes on the part of the whole class toward the physically disabled, and the latter group will overcome their sensitivities. If the adaptive program is isolated from the regular class work, the disabled students will receive more directed special attention from the teacher. They are not made to feel different from the regular class group, and they may progress at a more rapid rate due to intensive organization of activity and instructional supervision.

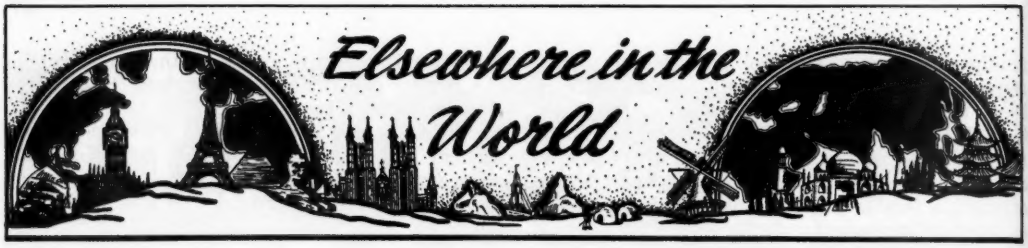
Readmission. All readmission procedures should follow school policy. Students are usually readmitted to class upon presentation of a readmit slip from the main office or homeroom teacher indicating whether the absence was excused or unexcused, a written note from the school or family physician if absence was of a medical nature, or upon completion of make-up requirements established by the physical education departments.

If you are genuinely concerned about improving your teaching and making the greatest contribution to each individual pupil, a serious review of your own situation, in light of the procedures suggested in this and previous articles, may be most helpful.

SKIN DIVING

Knee-deep in cold, flashing, bottle-green water, the oppressive weight of the aqua lung, the rush of water, the undertow, the vastness. Ahead, 5,000 miles of sparkling waves, then China. To the right, the shoreline stretching from sunny beaches to frozen wastes of ice and snow. On the left, a sandy beach; further south, a desert, then jungle, the Andes, plains, and the Antarctic. Waist deep . . . swells climbing up chest, over shoulders and neck . . . the surprising taste of salt. A curious eddy in the water six feet away . . . fear, panic, the unknown . . . the expectation of a silver flash beneath the waves and a blinding, stabbing pain. Waiting . . . adjusting the face mask over eyes and nose, the hollow sound of air in the tank . . . stale, dry. Water closing over head . . . silence, weightlessness . . . a wide-eyed look in all directions, the leisurely kick of finned feet; the long, slow glide downward over meadows of waving sea-grasses; down, down into azure blue depths. Lying alone on a sandy slope, looking up at a silver, undulating roof far above . . . small friendly fish frolicking in the rising profusion of air bubbles; curious fish hanging motionless, staring with round, unblinking eyes. Now and then a large, brown form slowly drifting in the dimness.

Bruce Riley



Edited by C. O. Jackson

Circuit Training

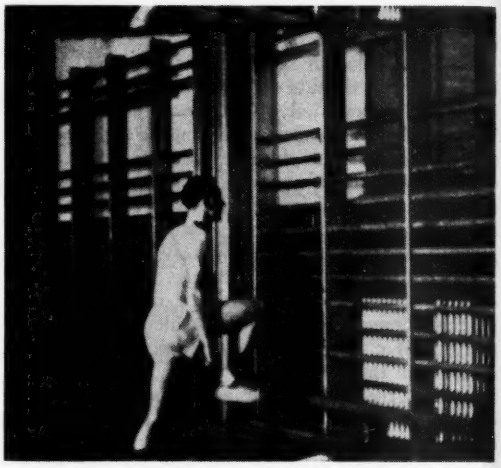
Graham T. Adamson

CIRCUIT TRAINING is a form of fitness training used by men students in the gymnasium of Leeds University, and at the present moment is also being used by many sporting organizations, including the Amateur Athletic Association and Football Association.

It has evolved over the years out of a search for a form of fitness training which would progressively develop muscular and circulo-respiratory condition (the hard core of physical fitness) and at the same time be attractive to students. Several years of experimentation with various kinds of activities had shown that none of the more orthodox types of training seemed to hold students, even though they realized the value of physical fitness.

The average University student at the age of 19 is a most unhappy person when he has to cope with his body weight by means of arm, shoulder and abdominal strength. Heaving work on beams and ropes is generally extremely poor. Even first team games players, athletes and physical education students can be included in this generalization. One suspects that those responsible for the previous physical education of these students have neglicted the principle of progressive loading—unhappily named the overload principle. According to this principle, it is impossible to increase muscular strength or endurance except by the imposition of progresssively heavier loads. A muscle can only increase in strength if it works at a greater rate than has been previously required. This, therefore, calls for some control of the work rate during training, so that a steady increase may be maintained, but if this happens in the "normal" P.T. lesson it is largely accidental.

As a result of an experiment on senior school boys aged 15 years, it was found that the "normal" strength training followed in boys' schools did not guarantee an increase in strength index, but by using a relatively small amount of intensive progressive resistance training, significant increases in strength and endurance were produced. Analysis of the normal physical training lesson reveals that the amount and quality of developmental training depends largely on the material selected from a wide range of activities, and on the "drive" exerted by the teacher. Boys are not worked hard enough, possibly because of lack of knowledge of their capacity, a fear that the boys may lose interest, or a fear of overstrain. The amount and quality of strengthening given is mere guesswork. There is no guarantee of "overload." A boy can leave school never realizing his lack of strength, and unless he is employed in heavy manual work, arm, shoulder and abdominal exercise gradually decreases.



Stepping (on 24" bench).

Circuit training attempts to remedy these defects, and has the following characteristics:

1. It aims to measurably improve the following components of physical fitness:
   a. Muscular strength.
   b. Muscular endurance.

Mr. Adamson is a lecturer in physical education, Leeds University.

c. Circulo-respiratory endurance.
d. Muscular power.

2. It is based on the work rate of the individual and employs the principle of progressive loading.
3. It is independent of teacher "drive."

The Circuit

To enable a large number of students to work at the same time but according to their own capacity, a number of exercises are selected and arranged in the form of a circuit round the gymnasium and numbered consecutively. They are so arranged that the student can proceed from one exercise to the next without undue local fatigue. These exercises are simple to execute, since fitness training should not be complicated by the need for particular skills. They should also be easily standardized (so that they are performed in the same way every time) and allow of a fairly accurate regulation of the amount of work done. In addition, circuit exercises are selected which have a positive effect on the four aforementioned components.

Administration of the circuit by the teacher follows the following pattern:

a. Teaching
b. Testing
c. Timing

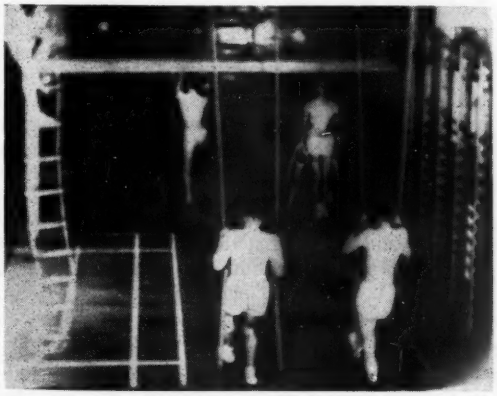
Teaching

On the first attendance the student "learns" the exercises to the satisfaction of the teacher, and then performs 3 laps of the circuit at learners' dosage at each exercise. This is repeated at the next two attendances by which time he is well practiced in the elementary skills involved, and is now ready to be tested to maximum on the circuit.

Testing

The student is now tested to maximum at each item in the circuit. For heavy resistance items, *e. g.*, body weight heaves, or bar and dumb-bell work emphasizing strength, the test is for maximum number of repetitions or the maximum in ½ minute, whichever is the less. For general endurance, items such as box stepping, squat jumps, etc., the test is for maximum or 1 minute, whichever is the less. One minute rest intervals between tests is allowed.

All students are given a Harvard Step Test if they so desire, to estimate initial circulo-respiratory condition and a vertical jump test to estimate initial power. Whenever he feels inclined, any student may test the strength of back, grip or legs by means of dynamometers. These tests are useful in assessing the value of the training to the teacher but are not essential for the performance of the circuit. The circuit performance tests are necessary, since it is upon them that the training rate is fixed. (It will be appreciated that these first attendances are periods of intense activity and the student does not feel that he is wasting his time.)



Rope swing, touch beam, both feet.

Timing

The student at his next attendance, performs three laps of the circuit at half his maximal figures, but without rest between items, and the time is recorded, *e. g.*, 21 mins. for three laps of a 10 item circuit. This figure is reduced by 1/3 to ascertain his "target" time, *i. e.*, 14 mins.

On subsequent attendances, the student works his way round the circuit at his training rate, striving to attain three laps in "target" time. When he achieves this he is re-tested to maximum to obtain his new training rate. In this way the student achieves that increase in intensity of training which insures increased fitness. His record sheet is available for reference if he requires it, and he can arrive at any time during the period set aside for circuit training which is sometimes as much as three hours. He can work away, quite independent of other students and yet feeling part of a large group.

Compiling a Circuit

A teacher or coach may wish to build up a circuit to cater for all-round improvement or to give a bias to one particular quality, *e. g.*, general endurance for the distance runner or power for the shot putter. For the former, heavy localized exercises would need to be replaced by those involving more general muscle activity and for the latter, inclusion of some fast explosive movements employing the whole body with maximum effort is indicated. Strength can generally be emphasized at the expense of endurance. This is strikingly illustrated by the practice of the weight lifter in search of high strength levels for competitive weight lifting purposes. His work-out involves extremely short periods of intense effort, using maximum resistance with very few repetitions alternated with long rest

periods. He does not work against the clock, and this practice hinders general endurance but rapidly promotes strength. However, before high levels of specific qualities of fitness are sought, the individual should make sure that he is at least "normally" equipped in the other components, which he may regard as unimportant.

Below is a record card of a "very good" student, showing learning, maximal, and training doses for a nine item circuit:

Name ---------- Dept. ------- --

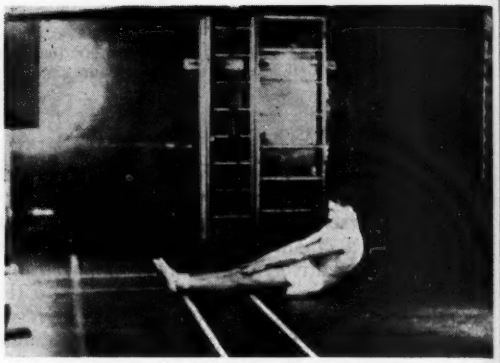
Training Days ----------

	Learning Dose	Max. Reps.	Training Dose
1. Steps (24") (1 min.)----------	15	40	20
2. Squat Thrusts (1 min.)--------	10	32	16
3. Jump "Chins" (½ min.) --------	5	16	8
4. Trunk Curls (1 min.) --------- (⅛ body wt.)	10	40	20
5. Dumb-bell Jumps (½ min.)----- (½ body wt.)	10	40	20
6. Bar-bell Curl (½ min.)-------- (½ body wt.)	5	18	9
7. Dumb-bell Squats (½ min.)----	5	18	9
8. Jump "Dips" (½ min.) --------	5	20	10
9. Rope Swing (½ min.) --------	3	10	5
Total Time ----------		16 mins.	
"Target" Time ----------		11 mins.	

Voluntary Training for Men

For the past three years, Circuit Training in one form or another has been used as voluntary training for men students in the University and it has proved extremely popular. At the beginning of the year all freshers are addressed and shown a film on Circuit Training and this has resulted in it being the most popular indoor physical activity in the University, surpassing even basketball. At first sight this may seem surprising. It might be feared that the students would find the same activities, week after week, monotonous. But it should be remembered that these are students who have opportunties for partaking in many other types of activity during the week. For them, this is a special period for the building up and toughening of their bodies and there is no doubt whatever that they find it very enjoyable. The reason for its appeal to students are enumerated below:

1. There is plenty of hard physical activity.
2. Each student works at a rate which is suited to him. He is fully extended, but not asked to do anything beyond his powers.
3. The students know in advance what they are going to be required to do. This is of particular importance with weaker and less confident students, who are sometimes afraid of what they may be asked to attempt in class. Once they have been, they feel at home on the circuit. They can work happily and inconspicuously among the good performers.
4. All students enjoy the freedom from the directions of an instructor and the constraints of having to behave as one of a class.
5. The opportunity to test the value of the training by measuring their improvement is a great motivating force.



Trunk curls.

Much remains to be investigated in this field of work. Often, in the absence of scientific data, we have had to proceed according to what appears reasonable or likely to be true. In testing results our methods of measurement are scientifically accurate, but in the performance tests and in the regulation of the rate of work we claim only an approximation. It is, however, an approximation which brings results; and the system of training is one which has the twin virtues of being simple to administer and attractive to perform.

The Role of the Teacher

To an observer of a class of students or schoolboys engaged in Circuit Training it might appear that there was very little for the teacher to do, other than to give appropriate signals at the beginning and end of the period. But like all systems which employ "activity" methods, Circuit Training makes great demands on the teacher. It demands, in the *first* place, knowledge—an adequate grasp of human biology upon which to frame the circuit. *Second*, it demands careful and intelligent organization. And, *third*, it demands an enthusiasm for fitness which will communicate itself to the boys and ensure that the training will never be a mechanical routine but always an exhilarating pursuit of bodily power and efficiency.

How About It?

Recreation: Activity with no end in view! (Exception is leap frog.) Wellman France.

Too many people confine their exercising to jumping at conclusions, running up bills, stretching the truth, and bending over backwards. —Margaret Firth.

Physical Education or "Wreck-Reation"

Anthony A. Annarino

WHAT HAS HAPPENED to the "education in Physical Education?" Have our so-called physical education programs been aiding the extreme progressives in shaking loose the foundations of discipline and self-control, in our youth, or have we been guilty of developing a rebellious personality through too strict regimentation? We call ourselves "Physical Educators", but are not too many solely equipment dispensers in a "wreck-reation" program without aims or purposes?

These are embarrassing questions. A look at the trend of physical education programs within the last thirty-five years may furnish us with some answers and have some bearing on the problems that confront us today.

Prior to World War I, we depended on the German and Swedish systems of physical education. Then, from that period to the present time, due to our social and political culture, we gradually drifted away from the extreme formal discipline to our so-called informal programs.

Many of today's programs consist mainly of the major sports with little stress and importance placed on teaching skills and fundamentals. There is definitely a place in our programs for informality, however, many are forgetting the formal programs employing the use of drills and lead-up games for teaching skills, fundamentals and techniques; utilizing calisthenics to minimize body injuries; and teaching marching tactics for better class organization and control.

We have come to think of a formal program as a strict, regimented type of system, when actually it consists of nothing more than an organization of teaching methods and materials, complete utilization of time and manpower, and a pattern by which we strive for complete education and development of the individual through physical activities.

Today, the American people are being criticized for becoming a nation of spectators. This may be true. If so, are we physical educators at fault? Are we developing a desire for active participation through some acquisition of skill on the part of the individual, or in our programs, is it merely the "Survival of the Fittest"?

Another major problem that confronts many communities is the moral disintegration of our youth, more commonly called "juvenile delinquency". Many explanations for causes have been offered, but few solutions have been given. The home, the school, the church, and the community have all been blamed. Can we say that some types of physical education we offer are also contributing factors?

One of our objectives is the training of leaders. How many times do we lose sight of the fact that in a group there are few natural leaders and many followers. By followers, we don't mean "sheep" or automats, but individuals, we don't mean "sheep" or directions, become part of a group, and abide by the rules and regulations laid down by civil, school, and parental authority. By adopting and carrying out a flexible formalized program, (not the strict regimented system or the "roll-the-ball-out" system) but by striking a happy medium between the two, we can develop this individual and in a small way contribute to the elimination of this major youth problem.

It's easy and convenient for a teacher to fall into the "wreck-reation" program rut. It takes an individual with patience and perseverance to inaugurate and develop an educational program . . . which are you?

Slow Down and Live!

We live for better or worse in a motor age. Every day the public is horrified by lurid reports of death on the highways.

Most drivers using parkways and expressways in urban areas are on trips involving short distances of, say, twenty miles. The maximum time saved by driving this distance at sixty instead of forty miles an hour is only ten minutes.

What possible value can these few minutes have? Are they worth a life? A look at these figures and the tragic record of a week-end's accidents raises the old question whether the lives and limbs of innocent people should be allowed to be endangered so that some goof can have a few more precious minutes to waste, after burning up the roads in a mad rush toward a cocktail, kaffeeklatsch or the evening pinochle game.

The traffic accident cost to the nation is almost beyond belief. It is estimated that the price of injury, property damage and insurance exceeds $3,000,000,000 per year.

The inescapable conclusion is that speed makes the difference between major and minor accidents—that is, between injuries and deaths—and that only drastic regulations of speed plus other controls can materially change the present horrible picture.

—Robert Moses.

Edited by Harry Grabner

Our guest callers are Walter and Vera Meier, editors and publishers of the *Midwest Dancer,* Des Plaines, Illinois.

We first met our guests at a clinic they conducted for the Fort Wayne, Indiana Callers Club and were impressed with the thoroughness with which they handled the affair.

Walter Meier, with his broad musical background, and his wife, Vera, with her extensive dance background, have developed into a team which is producing round dances always exciting, interesting, and danced by enthusiasts everywhere.

BLACK FOREST MAZURKA

German

Record: Folk Dancer MH 1048.

Another name for the dance is "Pfingstfreitag in der Probstei." Translated: Pentecost on the grounds of the Prior.

The dance describes the gathering of the people to observe the festivities of Whitsunday.

Meas. 1-2 Waltz (open)—waltz (open).
Meas. 3-4 Turn, 2, 3—clap, clap, clap.
Meas. 5-6 Step, step, hop—step, step, hop.
Meas. 7-8. Turn, 2, 3-4, 5, 6.

Partners side by side. Lady on gent's right, all facing counter clockwise in a circle (gent on the inside and lady on the outside of the circle). Inside hands joined shoulder high (gent's right is holding lady's left). Meas. 1 starting with gent's left and lady's right foot, both take one waltz step in line of direction, swinging joined hands forward. Meas. 2 repeat meas. 1 the gent starting with his right and the lady with her left foot and both swinging joined hands back to place. Meas. 3 partners release their joined hands and turn away from each other with three steps (gent turns left and lady turns right) to face each other at the end of the meas. The gent starts the turn with his left and the lady with her right foot. Meas. 4 partners facing each other clap own hands three times (one clap to each beat of the meas.). Meas. 5-6 partners take closed dance position and moving forward in the circle (counter clockwise), take two mazurka steps starting each meas. with the gent's left and the lady's right foot. The mazurka step is done in the following way: Count 1 gent steps forward with left and lady with right. Count 2 gent steps forward with right and lady steps forward with left. On both counts partners should lean forward. On count 3 both hop on inside foot (gent's right, lady's left) straightening body. Meas. 7-8 still in closed position partners turn to the left once around with six small steps. The gent turns backward and the lady turns forward.

SWEDISH VARSOVIENNE

Sweden

Record: Scandinavia 1120, Folk Dancer MH1023.

Ballroom Version.

Meas.	1- 2	Change, 2, 3-heel (pause 2, 3).
Meas.	3- 4	Change, 2, 3-heel (pause 2, 3).
Meas.	5- 6	Change, 2, 3-heel (pause 2, 3).
Meas.	7- 8	Change, 2, 3-heel (pause 2, 3).
Meas.	9-10	Step, step, hop-step, step, hop.
Meas.	11- 2	Change, 2-3-heel (pause 2, 3).
Meas.	13-14	Step, step, hop-step, step, hop.
Meas.	15-16	Change, 2-3-heel (pause 2, 3).
Meas.	17-24	Waltz (closed position).

Couples in a circle facing counter clockwise around the room. Lady is on gent's right. Gent is on the inside of the circle and lady on the outside of the circle. Partners in a cross shoulder hold position. Gent's right is holding her right over her right shoulder. His left hand is holding her left hand in front of his left shoulder. *NOTE:* Lady is slightly in front of gent. Meas. 1, both starting with the left foot change places with three walking steps. The gent moves to his right passing behind partner, the lady moves to her left passing in front of partner. Gent is now on the outside of the circle with the lady on his left. Meas. 2 both place right heel forward and a little to the right to count 1 and pause to count 2-3. Meas. 3 partners change back to original position with three walking steps both starting with right foot. The gent moves to the left passing behind partner and the lady moves to the right passing in front of partner.

Meas. 4 both place left heel forward and a little to the left to count 1 and pause to count 2-3. Meas. 5-8 repeat meas. 1-4. Meas. 9 partners still in cross shoulder hold position take two walking steps forward starting with the left foot to count 1-2 (left-right). On count 3 both hop on right foot and lifting left foot. Meas. 10 repeat meas. 9. Meas. 11 same as meas. 1 (changing places). Meas. 12 same as meas. 2 (placing right heel forward). Meas. 13 partners starting with right foot take two walking steps forward to count 1-2 (right-left). On count 3 both hop on left foot lifting right foot. Meas. 14 repeat meas. 13. Meas. 15 same as meas. 3 (change back to original position). Meas. 16 same as meas. 4 (both place left heel forward). Meas. 17-24 partners take closed dance position and waltz counter clockwise around the room but turning clockwise. The gent starting the waltz with the left foot and the lady with her right foot. *NOTE:* The lady has to shift weight from her right foot to the left foot at the beginning of meas. 17 so she can start the waltz with her right foot.

Peasant Version.

Meas. 1- 2 Step, step, step-heel (pause 2, 3).
Meas. 3- 4 Step, step, step-heel (pause 2, 3).
Meas. 5- 6 Step, step, step-heel (pause 2, 3).
Meas. 7- 8 Step, step, step-heel (pause 2, 3).
Meas. 9-10 Step, step, hop-step, step, hop.
Meas. 11-12 Step, step, step-heel (pause 2, 3).
Meas. 13-14 Step, step, hop-step, step, hop.
Meas. 15-16 Step, step, step-heel (pause 2, 3).
Meas. 17-24 Waltz (closed position).

Couples in a circle all facing counter clockwise. Lady is on gent's right. Gents on the inside of the circle, ladies on the outside of the circle. Partners in shoulder waist position. Gent's right arm around lady's waist and his left hand on his left hip. Lady's left hand on gent's right shoulder and her right hand on her right hip. Meas. 1, gent starting with left foot takes three steps in place (left-right-left). At the same time he turns his partner forward and in front of him to his left side and he places his left arm around her waist. The lady makes this left face turn to the other side of the gent with three steps starting with her right foot (right-left-right). She faces in the same direction as the gent and she places her right hand on his left shoulder. Meas. 2, gent places his right heel forward and slightly to the right to count 1 and pauses to count 2-3. The lady places her left heel forward and slightly to the left to count 1 and pauses to count 2-3. Meas. 3 the gent starting with his right foot takes three steps in place (right-left-right). At the same time he turns his partner forward and in front of him to her original place on his right. The lady makes this right face turn with three steps starting with her left foot (left-right-left). Gent's right arm is again around lady's waist and her left hand is on gent's right shoulder. Free hands are on hips. Meas. 4 gent places his left heel forward and slightly to the left to count 1 and pauses to count 2-3. The lady places her right heel forward and slightly to the right to count 1 and pauses to count 2-3. Meas. 5-8 repeat meas. 1-4. Meas. 9 partners still in shoulder waist position. Gent starting with his left foot and lady starting with her right foot take two walking steps forward to count 1-2. On count 3 both hop on inside foot (his right and her left) and lifting outside foot (his left and her right). Meas. 10, repeat meas. 9. Meas. 11-12 same as meas. 1-2 (Peasant Version). Meas. 13-14 same as meas. 9-10 but gent starting with right foot and lady with left foot and gent hopping on left foot and lady on right foot. Meas. 15-16 same as meas. 3-4 (Peasant Version). Meas. 17-24, partners take closed dance position and waltz counter clockwise around the room but turning clockwise. The gent starting the waltz with his left foot and the lady with her right foot. *NOTE:* Lady and gent use opposite feet throughout the Peasant Version and therefore the lady does not have to shift weight to start the waltz at meas. 17.

OUR FAVORITE WALTZ

(Record: Columbia 40303)
Originated by Walter and Vera Meier,
Des Plaines, Ill.

Meas. 1- 2 Balance; step, hold, close;
Meas. 3- 4 Balance; step, hold, close;
Meas. 5- 6 Step, draw, hold; step, touch, hold;
Meas. 7- 8 Step, draw, hold; step, touch, hold;
Meas. 9-10 Walk; walk (turn);
Meas. 11-12 Walk; walk (face);
Meas. 13-14 Step, touch, hold; step, touch, hold;
Meas. 15-16 Pivot, 2, 3; 4, 5, 6;
Meas. 17-18 Waltz (open); waltz (open);
Meas. 19-20 Waltz (closed); waltz (closed);
Meas. 21-22 Waltz (open); waltz (open);
Meas. 23-24 Waltz (closed); waltz (closed).

Couples stand in a single circle. Partners in closed dance position. Gent faces counterclockwise, lady faces clockwise.

Measure 1: Gent balances backward on left foot, lady balances forward on right foot.

Measure 2: Count 1, gent steps forward on right foot, lady steps backward on left foot. Count 2, both hold. Count 3, gent closes left foot to right foot and puts weight on left foot, lady closes right foot to left foot and puts weight on right foot.

Measure 3: Gent balances forward on right foot, lady balances backward on left foot.

Measure 4: Count 1, gent steps backward on left foot, lady steps forward on right foot. Count

2, both hold. Count 3, gent closes right foot to left foot and puts weight on right foot, lady closes left foot to right foot and puts weight on left foot.

Measure 5: Count 1, gent steps sideways, to the left, with left foot, lady steps sideways, to the right, with right foot (moving toward center of circle). Count 2, gent draws right foot to left foot and puts weight on right foot, lady draws left foot to right foot and puts weight on left foot. Count 3, both hold.

Measure 6: Count 1, gent steps sideways, to the left, with left foot, lady steps sideways, to the right, with right foot (moving toward center of circle). Count 2, gent touches right toe to floor beside left foot, lady touches left toe to floor beside right foot. Count 3, both hold.

Measure 7: Count 1, gent steps sideways, to the right, with right foot, lady steps sideways, to the left, with left foot (moving away from center of circle). Count 2, gent draws left foot to right foot and puts weight on left foot, lady draws right foot to left foot and puts weight on right foot. Count 3, both hold.

Measure 8: Count 1, gent steps sideways, to the right, with right foot, lady steps sideways to the left, with left foot (moving away from center of circle). Count 2, gent touches left toe to floor beside right foot, lady touches right toe to floor beside left foot. Count 3, both hold.

Measure 9: Partners turn, facing center of circle in half-open position (gent turns left, lady turns right). Gent steps forward on left foot, lady steps forward on right foot (moving toward center of circle).

Measure 10: Gent steps forward on right foot, lady steps forward on left foot (continuing into center of circle). Both immediately turn toward each other, half around, to face away from center of circle. While turning partners do not release hand-hold, gent turns right, lady turns left.

Measure 11: Gent steps forward on left foot, lady steps forward on right foot (moving away from center of circle).

Measure 12: Gent steps forward on right foot, lady steps forward on left foot (continuing away from center of circle). Both immediately turn to face each other. Gent now faces counterclockwise, lady faces clockwise. Partners are again in closed dance position.

Measure 13: Count 1, gent steps sideways, to the left, with left foot, lady steps sideways, to the right, with right foot (moving toward center of circle). Count 2, gent touches right toe to floor beside left foot, lady touches left toe to floor beside right foot. Count 3, both hold.

Measure 14: Count 1, gent steps sideways, to the right, with right foot, lady steps sideways, to the left, with left foot (moving away from center of circle). Count 2, gent touches left toe to floor beside right foot, lady touches right toe to floor beside left foot. Count 3, both hold.

Measures 15-16: Gent starts with left foot, lady starts with right foot. In closed dance position both pivot clockwise, once around, taking six small steps.

Measures 17-18: Partners release hand-hold and take side-by-side position facing counterclockwise. Lady now stands on gent's right, inside hands are joined (his right and her left). Gent starts with left foot, lady starts with right foot. Both take two waltz steps while moving forward. On the first waltz step both swing joined hands forward and slightly turn back to back. On the second waltz step both swing joined hands backward and slightly turn face to face.

Measures 19-20: Partners take a closed dance position. Gent starts with left foot, lady starts with right foot. Both take two waltz steps moving counterclockwise around the circle while turning clockwise around each other.

Measures 21-24: Repeat measures 17-20.

Repeat the dance two more times (three times in all). To end the dance, instead of taking the waltz step in measure 23, lady makes a right-face turn under gent's right and her left arm, while the gent takes three steps in place. Measure 24, gent bows and lady curtsies.

ARKANSAS TRAVELER VARIATIONS

As called by *Walter Meier,* Des Plaines, Illinois

1. The two head couples forward and back
   Forward again turn the opposite lady with the right hand 'round
   Partner left, with the left hand 'round
   Corners all with the right hand 'round
   Partner left turn once and a half around to your
   Right-hand lady with the right hand 'round
   Partner left with the left hand 'round but not too far
   The gents to the center like an allemande thar
   Back up boys but not too far
   The gents turn out and there you are
   A right and left and another star
   The gents turn out and here we go
   A right and left and a do-pas-o
   Partner left with the left hand 'round
   Corners all with the right hand 'round
   Partner left with the left hand 'round
   Promenade your corner when she comes around
   Repeat three more times to get original partners back

2. The two head couples forward and back
Forward again turn the opposite lady with the right hand 'round
Partner left with the left hand 'round
Corners all with the right hand 'round
Partners left turn once and a half around to your
Right-hand lady with the right hand 'round
Go back to your partner and catch all eight
With the left hand half around
Back with the right go all the way around
To your right-hand lady to a left allemande
Partner right and a right and left grand
Meet your partner turn right back
Go back home the other way back
Meet your partner with the right hand 'round
It's once and half and here we go to the
Right-hand lady for a do-pas-o
Partner left with the left hand 'round
Corner lady with the right hand 'round
Partner left with the arm around
And promenade that lady home
Repeat three more times to get original partners back

SPANISH CAVALERO

(Singing Call)

Original by *Walter Meier*, Des Plaines, Illinois
Record: Old Timer 8055

Introduction

All join hands and circle to the left
You circle with your Spanish Cavalero
You are going wrong go back the other way
To the home of your Spanish Cavalero
Allemande left your corner and a right hand to your own
A grand old right and left until you meet your own
When you meet your partner you promenade back home
You promenade your Spanish Cavalero

Figure

The two head couples promenade around the outside ring
You promenade your Spanish Cavalero
The two head couples right and left through the sides will do the same
You turn the girls around and all four ladies chain
You chain the ladies over, chain back across the hall
Turn the girls around and you listen to my call
Four gents star right across the square turn the opposite lady and leave her there
Swing your corner lady and you swing her 'round and 'round

Break

Allemande left your corner and right hand to your own
A grand old right and left around the ring you go
When you meet your partner you promenade back home
You promenade your Honolulu Baby

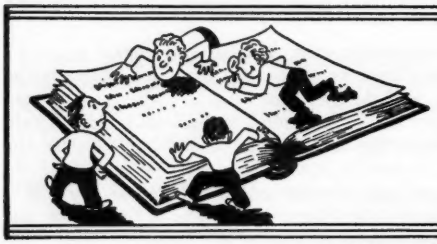
Repeat Figure with head couples leading out
Repeat Break
Repeat Figure with side couples leading out
Repeat Break
Repeat Figure with side couples leading out
Repeat Break

Ending

All join your hands and circle to the left
You circle with your Spanish Cavalero
You are going wrong go back the other way
To the home of your Spanish Cavalero
Allemande left your corner and you pass right by your own
Swing your right-hand lady and you swing her all alone
Allemande left around just one you promenade that girl you swung
You promenade your Spanish Cavale—Red Hot
Turn the right-hand lady with the right hand 'round your partner by the left
Your corners all with the right hand 'round your partner by the left
Now take that corner maid and we all promenade
You promenade your Honolulu Baby

ANNOUNCEMENT

Marion North, Movement and Dance Lecturer and Research Investigator at the Art of Movement Center in England will be on the Indiana University campus May 31st to June 14th. In this concentrated two weeks course, Miss North will place especial emphasis on a study of the principles of basic movement both functional and expressive, the psychological implications of movement and the education of children and adults through the art of movement. Two and one half hours of graduate credit may be earned.



BOOK Reviews

Edited by K. W. Bookwalter

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, *American School Curriculum,* (31st Yearbook), Washington, National Education Association, 1953, 550 pp. $5.00.

This volume is addressed to school administrators, classroom teachers, students in school administration, and laymen. It is aimed to provide a basis of curriculum improvement on which many will recognize the opportunities for satisfying, constructive endeavors.

The school curriculum is presented by considering the general curriculum requirements of the first schools in America and our faith in education to the present-day curriculum developments with their influences, achievements, understanding, and effectiveness.

The scope of this book includes twelve chapters concerned with what schools are for, how children learn and grow, organizing the curriculum, mobilizing for curriculum improvement, curriculum developments in elementary schools; and secondary schools, better aids to instruction, teacher's role in curriculum improvement, home and community influence instruction, building public understanding, how to appraise classroom achievement, and appraising the school's total effectiveness.

JOHN HODAPP.

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, *Preparation of Core Teachers for Secondary Schools,* Washington, National Education Association, 1955, 90 pp., $1.25.

Increasing demands on the public schools bring about a need to combine activities into larger than usual blocks of time so that the pupils and teacher may engage in a wide variety of significant activities. There are five areas in which the core teacher must develop effective skill and competence, such as: understanding the adolescent, using major fields of knowledge as sources for studying and solving problems, using the democratic group processes, counseling and guiding adolescents, and organizing and utilizing learning materials.

The five chapters in the booklet deal with "The Need for New General Education in the High School," "The Need for Core Teachers," "What Kind of Teacher is Needed for Core Classes?" "Proposals for Preservice Education of Core Teachers," and "In-Service Education of Core Teachers."

CAROLYN BOOKWALTER.

BECK, ROBERT H.; COOK, WALTER W.; and KEARNEY, NOLAN C., *Curriculum in the Modern Elementary School,* New York, Prentice-Hall, Inc., 1953, 584 pp. $4.95.

This book relates basic principles of psychology and the social sciences for the daily learning of children. It serves the purpose of coordinating and organizing the material from such sources as the teaching of reading, arithmetic, measurement and evaluation, and educational psychology.

The book in divided in three parts. Part I is devoted to the practical implications of work that has been done on ways to motivate children, to increase the effectiveness of group work and social learning, and to increase quality, rate, and permanency of learning. Part II classifies and describes the various types of curricula—their content, strengths, and limitations.

Part III is composed of three narratives illustrating how teachers in three different communities approach their classroom work, working with parents in a community, and develop instruction that applies the principles developed in Parts I and II.

JOHN HODAPP.

BENNETT, COLLEEN L., and BENNETT, W. GORDON, *The Organization of Aquatic Clubs,* Ann Arbor, Mich., The Overbeck Co., Pub., 1955, 112 pp. $1.75.

This is a small but well-organized and well-written book for those interested in synchronized swimming. There are three chapters in the book. The first chapter deals with the history and values of synchronized swimming. The second chapter includes suggestions for setting up an aquatic club organization, planning the meetings, and obtaining publicity. The third chapter contains illustrations and descriptions of 47 synchronized swimming stunts. A good bibliography and "the Handbook of Synchronized Swimming for the Catalina Nymphic Aquatic Club" concludes the book.

CAROLYN BOOKWALTER.

BRESNAHAN, GEORGE, TUTTLE, W. W., and CRETZMEYER, FRANCIS, *Track and Field Athletics,* 4th edition, St. Louis, C. V. Mosby Co., 1956, 528 pp. $5.50.

This revised edition has a few new features and an additional author. It is an attempt to bring the principles involved in coaching track and field

athletics up to date. A useful outline guide has been placed at the beginning of each chapter.

The various phases of each event are discussed in progression pattern of execution. Besides discussing each event separately the following chapters are included: Conditioning for Track and Field Events, Preliminary Season Preparations, Physical Aids for the Track and Field Athlete, Experimental Research Contributions to Track and Field Athletics, The Responsibilities for the Conduct of a Track and Field Meet, Track and Field Construction, and Preparations for a Track and Field Meet. A list of journals and periodicals and a glossary is also included.

The book offers a valuable sequential presentation of all phases of Track and Field Athletics pertinent to the interests of the physical education instructor, track coach, and athlete or prospective coach.

GILMAN W. HERTZ.

GERI, FRANK H., *Illustrated Games and Rhythms for Children,* New York, Prentice-Hall, Inc., 1955, 196 pp. $3.95.

Graphically illustrated with cartoon figures, this book presents a fine collection of games and rhythmic activities suitable for the primary grades. In keeping with the clear, concise style used in his book, *Illustrated Game Manual,* Mr. Geri, Director of Playgrounds at Bellingham, Washington, has used a minimum of words and a maximum of pictures to indicate play suggestions for teachers, playground supervisors, directors, parents, and camp counsellors.

The nine sections of the book deal with fundamental rhythms, animal rhythms, dancing and singing games, tag and goal games, special events, circle activities, and relays. Ideas for crafts and dramatic play are offered along with outlines for planning, motivation, and program for special events. The book should be a real addition to the professional library of any individual who deals with early elementary children.

JANET MACLEAN.

HENRY, NELSON, Editor, *The Public Junior College,* 55th Yearbook of the National Society for the Study of Education, Chicago, Ill., University of Chicago Press, 1956, 347 pp. $4.00.

The public junior college meets the needs of those persons who wish to advance their education without having to leave their locality where there is no senior college or university. These colleges are limited in offerings in general education, vocational education and community service. However, suggestions are made for the improvement of the public junior college and what may be expected in the future.

The last part of the book deals with the practices and recommendations for establishing a public junior college. There is an excellent classified bibliography. It includes philosophy, history, current development, students served by the junior college, general education program, preparation for advanced study, preparation for quick employment, community services program, student personnel services, instruction in the junior college, legal status of the junior college, financing the junior college, and organizing and establishing the junior college.

CAROLYN W. BOOKWALETR.

HUNT, VALERIE, V., *Recreation for the Handicapped,* New York, Prentice-Hall, Inc., 1955, 340 pp. $6.65.

Here in Miss Hunt's book is a clear-cut picture of the situation, combined with remedies for the existing difficulties as well as specific suggestions as to how those remedies can be effected.

The book is divided into two sections. Part I deals with a brief survey of the nature of man and his environment, philosophy of recreation, patterns of play expression, and the different recreation needs of the handicaped.

Part II reviews background information and implications for recreation for each of thirteen specific types of handicapped individuals. Definite suggestions for activities for each of the groups are offered. Helpful hints on the psychology of handling the handicapped are presented.

Miss Hunt has dealt sympathetically and informationally with her topic. This book should not only encourage those who have been interested in the handicapped to broaden programs, but it should stimulate those who have not accepted the challenge of the handicapped to a deeper understanding of their problems and needs.

JANET MACLEAN.

SNEAD, SAM, *Natural Golf,* Edited by Tom Shehan, New York, A. S. Barnes & Co., 1953, 208 pp. $3.00.

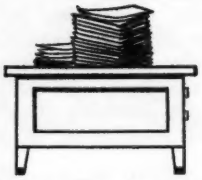
This book is interestingly and informatively written for the average or novice golfer. The content of the book is based primarily on one's ability to relax and release tension in order to play golf naturally.

The group, position at the ball, swing, woods, irons, putting, corrections, and variations, bad weather, and traps are dealt with specifically with a chapter in the book devoted to each. Also contained as a final chapter in the book are questions collected from a group of novice golfers with appropriate answers.

The book is profusely illustrated with a number of illustrations presented at the end of each chapter and appropriately described to emphasize the particular phase of golf described therein.

This book should serve as a check list of the necessary techniques for good golf and would make a good reference for the individual and the teacher.

JOHN B. HODAPP.



Recent ARTICLES

Edited by K. W. Bookwalter

HEBEL, EVERETT L., "Planning a Field House for High School Interscholastics," *Journal of Health—Physical Education—Recreation,* 27; 2:25, 26, February, 1956.

A number of New Jersey communities have built field houses. There should be included in the field house, areas such as: varsity dressing room, junior and freshman dressing room, equipment drying room, lavatory facilities for both dressing rooms, shower and drying facilities, coaches' and officials' rooms, trainers' room, equipment storage room, spectators' rest rooms, boiler room, equipment maintenance room, lecture room, concessions, and provisions for the girls' programs.

CAROLYN BOOKWALTER.

HOYMAN, H. S., "Are High School Health Texts Too Difficult?" *Journal of School Health,* 25; 10:274-282, December, 1955.

Studies, using the Fog Index and Flesch Index, revealed that some senior high school health texts might be too difficult, especially when the more difficult texts are used in the 9th grade or when used by below average readers in any of the grades 9 to 12. Each of the 20 health texts was given an over-all grade level rating according to the Fog Index, resulting in a range of 6 grade levels (9 through 14).

The number of grade levels of reading difficulty represented in one text ranged from 6 (grades 9-14) to 13 (grades 4-16). Of the 300 sample passages taken from the 20 texts, 58 per cent fell into the secondary level (grades 9-12), 31 per cent fell into the college level, and only 11 per cent fell below the 9th grade level of reading difficulty. All of the texts tested contained passages at the college level of reading difficulty; 80 per cent of the 300 passages had reading difficulty levels of grade 10 or higher; furthermore apparently none of the 20 texts were based upon a reading progression from easier to more difficult material.

It is the opinion of the author that new and revised high school texts should be pre-tested more carefully for (1) reading difficulty, (2) reading progression, and (3) reader interest.

C. HAROLD VEENKER.

Loewendahl, Evelyn, *How to Develop Physical Functions in The Growing Individual,* New London, Conn., Arthur C. Croft Publishers, 1954. 7 pp. $2.00.

The charts include the stages of skeletal and nerve muscle growth at each age level, the objectives to be obtained at each age level, the physical factors involved in those objectives, and a program of movement illustrating the physical functions at their various levels and development.

Levels included are those from age three to sixteen.

The charts are well illustrated and should prove to be useful for the elementary and secondary teacher of physical education as well as the lay person.

J. ALLEN

ORLANDO, ANTHONY E., "Target Golf, a New Game," *Journal of Health—Physical Education—Recreation,* 27; 2:10, 11, February, 1956.

The object of the game is to see how well the player executes various shots by shooting an imaginary game of golf (18 holes) at a series of targets, keeping score as in a real game. Plastic or fabric balls are used. The targets vary in difficulty which cause the players to bring into play all of the clubs. Numbers on the targets represent the distances the players' shots have presumably traveled. Targets are set up for wood shots, long iron shots, pitch shots, chip shots, and putts.

It has been found that students enjoy the game a great deal and a high level of interest is maintained throughout a golf course.

CAROLYN BOOKWALTER.

PHILLIPS, MARJORIE, ET AL. "Analysis of Results from the Kraus-Weber Test of Minimum Muscular Fitness in Children," *Research Quarterly,* 26; 3:314-323, October, 1955.

In the *Research Quarterly* of May, 1954, Dr. Hans Kraus and Mrs. Ruth P. Hirschland reported on the "Comparative Fitness of European and American Children."

The Kraus-Weber Test is composed of flexibility, abdominal plus psoas, abdommas minus psoas,

psoas upper back and lower back exercises. These were administered to 1456 Indiana children, ages 6-12. Reliability tests were repeated on 215 children. These reliabilities ran from 954 to 990. There were no significant differences on grip strength of 126 Kraus-Weber Test successes and failures.

In Kraus study test failures were 80.0%; in Indiana, 53.9%. Flexibility failure for Kraus, 44.3%; Indiana, 36.3%.

Indiana girls were superior to boys at each age due to *flexibility*. Inflexibility increases for boys and girls, while other items decrease in failures with age. The greatest per cent of failure on strength items is on abdominals minus psoas. The back tests failures are nil after 9 years of age. No item exceeds 8% failure after 11 years.

There is some doubt as to the validity of scoring a child a test failure for any one test item. (Similar results were found in a contemporary Iowa study.)

KARL W. BOOKWALETR.

STULL, DOROTHY, "What to Do After a Heart Attack? Exercise!" *Sports Illustrated,* January 2, 1956, pp. 44-47.

Since Dr. Paul Dudley White prescribed exercise for the President, more and more doctors are realizing that it is a potent factor in getting over a heart attack.

This revolutionary treatment of exercise, putting an end to the many years of invalidism, prescribes physical activity, properly supervised, following a heart attack. Exercising should begin gradually, be stopped if the convalescent heart is overtaxed, and rest until recovered.

The amount of exercise is an individual proposition usually based upon the previous athletic endeavor of the coronary patient. However, all are encouraged to exercise, even those who had done nothing prior to the attack. Life is full of emergencies; a man in training is more able to meet them.

A program of graduated exercise can be started the first week following the attack by simple activities in bed to keep up muscle tonus and improve circulation. A suggested weekly exercise chart is included, but supervision recommended.

This article gives a frank appraisal of recovery measures following a heart attack and buoys up heart attack victims by reassuring them that the heart helps those who help themselves.

GILMAN HERTZ.

"The White House Conference on Education," *Journal of Health—Physical Education—Recreation,* 27; 1:18, 19, January, 1956.

The three-day White House Conference convened November 28, 1955. In attendance were 1200 lay persons and 500 educators. It was the consensus of the groups that the school should continue to develop physical and mental health and wise use of leisure; school systems should be organized more efficiently and economically, and consideration be given to a 12-month school; there should be cooperation between public and private authorities in providing school facilities; the basic facilities for every satisfactory school building should include housing for all functional services required to carry on educational programs anticipated; to increase the supply of good teachers, the prestige and salary structure must be comparable to other professions and the job must challenge and attract talented people; all states should be eligible for Federal funds granted on the basis of demonstrated needs; and public interest should be created through various organizations, conferences, demonstrations, and activities.

CAROLYN BOOKWALTER.

WALKE, NELSON S., DOSCHER, NATHAN, and CADDY, GLENNA GARRETT, *Good Health for You, Your Family and Your Community.* New York, McGraw-Hill Book Company, 1955, 415 pp. $4.75.

The family and its health are treated under such topics as stages in healthful family living, heredity, preparation for family life, feeding the family, health and medical care and dental health.

Under community health are public health, demography, control of communicable diseases, specific programs for the prevention of prevalent communicable diseases, chronic and degenerative diseases, mental hygiene, control over foods, drugs and cosmetics, housing and environment, accident prevention, occupational health, school health, and first aid and disaster control.

Personal health includes personal appearance, maintaining optimum weight, vision and hearing, narcotics and stimulants, and recreation and rest.

Each chapter provides problems for discussion or term papers, interesting outside readings, and numerous tables, figures, and tables to make the text a helpful one for college instruction.

K. W. BOOKWALTER

"HOW WE DO IT"

Game Book—American Association for Health, Physical Education and Recreation. Eleanor Parker King. 1956. $2.50.

11 sections and includes 120 games, contests and relays.

Who's Who in the Profession

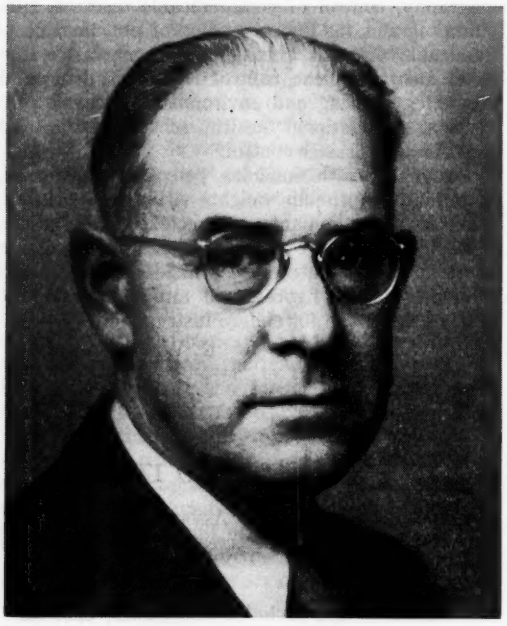
Edited by K. W. Bookwalter

RAY O. DUNCAN was born in Granite City, Illinois on December 7, 1906. He received the LL.B. from Washington University (St. Louis) and the A.M., M.Ed. and Ed.D. degrees from the University of Illinois. He has had experience teaching health and physical education, and in coaching athletics in high school. He was an instructor of physical education, assistant coach, and Director of Physical Education and Athletic Placement Service at the University of Illinois from 1937 to 1943. At that time, he was appointed Director of Health and Physical Education in the Illinois State Department of Public Instruction. He is at present Dean of the School of Physical Education and Athletics at West Virginia University.

Dr. Duncan has served on many committees of the American Association for Health, Physical Education, and Recreation. He served as president of the Illinois Association for Health, Physical Education and Recreation; president of the Society of State Directors; chairman of the Supervisors Section, National Safety Council; and is the new president of the American Association for Health, Physical Education and Recreation. He is listed in *Leaders in Education* and was recently elected a Fellow in the American Academy of Physical Education.

He has contributed to the literature through many articles dealing with practices in football, physical conditioning, physical education, and safety. His books include Six-Man Football, Physical Conditioning (with G. T. Stafford), and Administration of Physical Education (with C. E. Forsythe).

RAY O. DUNCAN



CLAIR V. LANGTON

DR. CLAIR VAN ORMAN LANGTON was born in Millgrove, Ontario, November 1, 1895. After graduation from Michigan State College, he earned three degrees from the University of Michigan, a B.S., an M.S., and a Dr. P.H. His Ed.D. came from the University of Oregon.

He served as director of the Midland, Michigan, Community Center, and later as Assistant Director of Intramural Sports at Ann Arbor. After serving as Assistant Professor of Hygiene, and Director of Public Health Laboratory, he went to Oregon State College as Director of Health and Physical Education.

He holds memberships in the American Public Health Association, the Society of Physical Education and College Directors, and has served as president of the Michigan Physical Education Association, the Oregon Physical Education Association, and the Northwest District. He was on the Board of Directors of the American Association for Health, Physical Education and Recreation for several years, besides being a member-at-large of Sigma Delta Psi.

He is a Fellow of the American Association for Health, Physical Education and Recreation, the American Academy of Physical Education, and the American College of Sports Medicine. Dr. Langton received the Anderson Award in 1954.

Listed in "Who's Who in America," "Who Knows and What," "American Men of Science," and in "Leaders in Education," he is the author of a number of books, including the Practice of Personal Hygiene, Orientation in School Health, Hygiene Guide Books, and Health Principles and Practices.